

<b>Proposal # 2001-</b> <u>C-211</u> <b>(Office Use Only)</b>
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**PSP Cover Sheet** (Attach to the front of each proposal)

Proposal Title: Merced River Ranch Restoration: Next-Phase Project  
 Applicant Name: URS Woodward Clyde and California Department of Fish and Game  
 Contact Name: Steve Kellogg (URS Woodward Clyde)  
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**Amount of funding requested:** \$ Phase II = \$535,361; Phase III = \$2,613,637

Some entities charge different costs dependent on the source of the funds. If it is different for state or federal funds list below.

State cost \_\_\_\_\_ Federal cost \_\_\_\_\_

**Cost share partners?**

☒ **Yes** ☐ **No**

Identify partners and amount contributed by each CVPIA - Anadromous Fish Restoration Program,  
\$50,000

**Indicate the Topic for which you are applying (check only one box).**

- |   |  |
|---|--|
| <input type="checkbox"/> Natural Flow Regimes                           | <input type="checkbox"/> Beyond the Riparian Corridor                |
| <input type="checkbox"/> Nonnative Invasive Species                     | <input type="checkbox"/> Local Watershed Stewardship                 |
| <input checked="" type="checkbox"/> Channel Dynamics/Sediment Transport | <input type="checkbox"/> Environmental Education                     |
| <input type="checkbox"/> Flood Management                               | <input type="checkbox"/> Special Status Species Surveys and Studies  |
| <input type="checkbox"/> Shallow Water Tidal/ Marsh Habitat             | <input type="checkbox"/> Fishery Monitoring, Assessment and Research |
| <input type="checkbox"/> Contaminants                                   | <input type="checkbox"/> Fish Screens                                |

What county or counties is the project located in? Merced County

**What CALFED ecozone is the project located in? See attached list and indicate number. Be as specific as possible** 13.3 - East San Joaquin Ecological Management Zone, Merced River

**Indicate the type of applicant (check only one box):**

- |  |   |
|--|---|
| <input type="checkbox"/> State agency  | <input type="checkbox"/> Federal agency |
| <input type="checkbox"/> Public/Non-profit joint venture                     | <input type="checkbox"/> Non-profit     |
| <input type="checkbox"/> Local government/district                           | <input type="checkbox"/> Tribes         |
| <input type="checkbox"/> University  | <input type="checkbox"/> Private party  |
| <input checked="" type="checkbox"/> Other: <u>Private Party/State Agency</u> |   |
| <u>Co-Applicants</u>   |   |

**Indicate the primary species which the proposal addresses (check all that apply):**

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> San Joaquin and East-side Delta tributaries fall-run chinook salmon | <input type="checkbox"/> Spring-run chinook salmon          |
| <input type="checkbox"/> Winter-run chinook salmon  | <input checked="" type="checkbox"/> Fall-run chinook salmon |
| <input type="checkbox"/> Late-fall run chinook salmon   | <input type="checkbox"/> Longfin smelt                      |
| <input type="checkbox"/> Delta smelt  | <input checked="" type="checkbox"/> Steelhead trout         |
| <input type="checkbox"/> Splittail  | <input type="checkbox"/> Striped bass                       |
| <input type="checkbox"/> Green sturgeon   | <input type="checkbox"/> All chinook species                |
| <input type="checkbox"/> White Sturgeon   | <input type="checkbox"/> All anadromous salmonids           |
| <input type="checkbox"/> Waterfowl and Shorebirds   | <input type="checkbox"/> American shad                      |
| <input type="checkbox"/> Migratory birds  |   |
| <input type="checkbox"/> Other listed T/E species: _____  |   |

**Indicate the type of project (check only one box):**

- |  |   |
|--|---|
| <input type="checkbox"/> Research/Monitoring           | <input type="checkbox"/> Watershed Planning |
| <input checked="" type="checkbox"/> Pilot/Demo Project | <input type="checkbox"/> Education          |
| <input type="checkbox"/> Full-scale Implementation     |   |

Is this a next-phase of an ongoing project? Yes X No \_\_\_\_\_  
Have you received funding from CALFED before? Yes X No \_\_\_\_\_

If yes, list project title and CALFED number See Attachment A

Have you received funding from CVPIA before? Yes X No \_\_\_\_\_

If yes, list CVPIA program providing funding, project title and CVPIA number (if applicable):

See Attachment B

**By signing below, the applicant declares the following:**

- The truthfulness of all representations in their proposal;
- The individual signing the form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or organization); and
- The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the PSP (Section 2.4) and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent as provided in the Section.

VANCE G. BENTE

Printed name of applicant

(Vance G. Bente), DEPT. MGR., VICE-PRESIDENT

Signature of applicant

## **Projects Previously Funded by CALFED or CVPIA**

### **ATTACHMENT A**

The San Joaquin Valley – Southern Sierra Region of the DFG has received funding for several other projects from CALFED. These are:

99-B153      Merced River Corridor Restoration Phase II (joint w/DWR) – *recently constructed within budget; revegetation and monitoring underway*

98-C1009      Merced River Salmon Habitat Enhancement Phase III (joint w/DWR) – *final design in preparation; a supplementary proposal to address anticipated funding shortfalls; environmental permitting initiated 2/15/01. (fun*

98-H1001      SJV Salmonids in the Classroom Program Enhancement – *completed; translated materials in use*

97-H121      Developing a Genetic Baseline for San Joaquin Salmon – *contract with UC Davis in place; year 1 of 3 completed.*

97-H122      Merced River Ranch Acquisition and Restoration (joint w/WCB) – *acquisition phase moving to close escrow spring 2000*

97-H125      Gravel at Basso Bridge – *completed; monitoring underway*

97-H123      Basso Bridge Land Acquisition (joint w/WCB) – *acquisition proceeding on 1 of 2 parcels*

### **ATTACHMENT B**

The San Joaquin Valley – Southern Sierra Region of the DFG has received funding for several other projects from CVPIA – Anadromous Fish Restoration Program. These are:

00-L D-10      Feasability of Long Term Aggregate Source for San Joaquin Tributary Channel Restoration Projects

99-L A-7      Ratzlaff Reach: Merced River Corridor Restoration Phase II (joint w/DWR) – *recently constructed within budget; revegetation and monitoring underway*

99 L A-8      Lower Wester Stone Preliminary Design: Merced River Corridor Restoration Phase IV (joint w/DWR) - *contracting in process.*

99 L D-10      Riffle Atlas Update for San Joaquin Tributaries – *Agreement completed 4/00.*

## EXECUTIVE SUMMARY

<b>Project Title:</b>	<b>MERCED RIVER RANCH RESTORATION: Next Phase Project</b>	
<b>Co-Applicants:</b>	<b>URS Woodward Clyde</b>	<b>California Department of Fish and Game, Region 4</b>
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<b>Contact:</b>	<b>Steve Kellogg</b>	<b>Rhonda Reed</b>

**Participants and Collaborators** The Project Team consists of URS Woodward Clyde (URS), the California Department of Fish and Game (CDFG), and Stillwater Sciences (Stillwater). URS will be the CALFED contractee and will be responsible for payments, reporting, and accounting. The California Department of Fish and Game will be a co-applicant and provide technical oversight and management. Stillwater will be a technical subconsultant on this project.

**Costs** The estimated total cost for Phase II is \$ 535,361 and for Phase III is \$ 2,613,637.

**Project Description, Size, and Location** The proposed Merced River Ranch Restoration project site purchased with CALFED funds (1998-C04) consists of 318 acres of floodplain, river channel and upland terrace habitats. The site is located in northeastern Merced County (N37°32'5", W120°23'25") in CALFED's East San Joaquin Ecological Management Zone, Merced River Ecological Management Unit (13.3).

**Primary Biological/Ecological Objectives** The primary biological/ecological objectives of the project are (1) to restore natural biological and geomorphologic processes to the floodplains and channel of a reach of the Merced River, (2) to learn how to better restore biological and geomorphic processes through the factorial experimental design restoration approach, and (3) to use adaptive management techniques in the pilot project to reach a desired outcome.

**Project Approach** The project approach includes: design of a restoration plan for the entire Merced River Ranch site; preparation of environmental documentation and permits; and demonstration of the restoration design by implementing a pilot restoration of 60 acres of floodplain and channel areas on the site.

**Hypotheses** Main hypotheses to be tested are (1) stability (scour and deposition) of floodplain and channel within existing hydrologic regime, (2) native riparian vegetation community composition, extent, and planting success (by varying factors thought to influence recruitment, establishment, and growth of native riparian plants), and (3) abundance of special status species from pre-restoration to post-restoration conditions.

**Uncertainties and Expected Outcome**

The Project Team expects to restore natural physical and biological processes to a degraded reach of the Merced River within the context of the current hydrologic regime.

**Compatibility with CALFED ERP goals**

This project supports the CALFED ERP vision and goals of restoring important ecological functions and processes to improve habitat for chinook salmon, steelhead, native amphibians and reptiles, riparian vegetation, and other wildlife resources. Specifically, it addresses ERP goals of restoring a more natural channel/floodplain; a meander belt and floodplain connectivity; gravel recruitment; and riparian and floodplain habitats.

## PROJECT DESCRIPTION

### Statement of Problem

#### Problem and Background

Historically, the lower Merced River watershed has been physically altered by dam construction and operation, flow diversions, gold and aggregate mining, levee construction, channel straightening, and land use changes adjacent to the river. Specifically, river flows have decreased due to upstream water diversions for irrigation; sediment supply to the active channel and floodplain has been cut off by the construction of dams; and historic floodplains have been covered by gold dredge tailings (Cabezut-Ortiz 1987; Akagi 1994). These physical alterations have led to changes in natural fluvial geomorphic and ecological processes in the Merced River. As a result, habitat for many aquatic species (i.e., anadromous fish species) and riparian species has been degraded so that populations of these species have significantly diminished (Vick 1995).

Watershed-scale restoration planning and strategies were initiated recently to address the ecosystem effects of these alterations on physical and biological processes in the Merced River corridor. In November 1998, the U.S. Fish and Wildlife Service Anadromous Fish Restoration Program (AFRP) funded and assisted Merced County in establishing the Merced River Stakeholder Group and Technical Advisory Committee (TAC). As part of the Merced River Corridor Restoration Project (CALFED project number 2000-F04 and 2000-F05), Stillwater Sciences and Merced County Planning and Community Development Department collected baseline geomorphic and ecological data throughout the watershed (Phase II) in order to develop a riparian restoration model. The model uses current geomorphic processes to determine quality, quantity, and distribution of physical habitat (Phase III).

Several smaller-scale (site-specific) restoration projects have been implemented within the lower Merced River Watershed during the 1990s, which focus on specific objectives. A series of riffle reconstruction projects for spawning habitat improvement was undertaken below Crocker-Huffman Dam (RM 52) by CDWR and CDFG. The Merced River Salmon Habitat Enhancement Project (U.S. Fish and Wildlife Service, California Department of Fish and Game, and the California Department of Water Resources) is focusing on improving juvenile salmon survival rates throughout a 3.5-mile section of the river between RM 40.0 and 43.5, near Snelling, California. The primary project objectives are to isolate predator habitat, restore riparian habitat, and enhance channel and floodplain dynamics. Phase I, the Ratzlaff site, has been constructed. Phase II, the Robinson Ranch site, is currently under design and will begin construction in 2001.

Restoration efforts in the Merced River watershed and elsewhere in California have not focused on reconstruction of floodplains containing dredge tailings. From 1907 to 1951, several dredging companies operated bucket dredgers in the floodplains and channel of the Merced River, digging and screening placer gravels; washing the material dredged; saving the metals; and re-depositing the unused gravels and sediment back in the floodplains in large piles (Aubury 1905; Averill 1946; Davis and Carlson 1951; and Cabezut-Ortiz 1987). Tailings deposited by dredging operations along the Merced River floodplain corridor have resulted in a severe narrowing of the active floodplain and altering of natural geomorphologic and ecological processes within this ecosystem.

The Project Team (URS, DFG, and Stillwater) is proposing to restore floodplain and channel habitats on the Merced River Ranch property (project site)(Figures 1 and 2, Appendix D). The landscape, topography, geomorphology, and resulting vegetation on the project site were altered extensively by gold dredging operations of placer gravel in the early 1900s (Davis and Carlson 1951). The project site is located at River Mile (RM) 51 downstream of the Crocker-Huffman Dam and is within a designated salmon spawning area (Fish and Game Code 1505)(Figures 2 and 3, Appendix D). The Merced River Ranch property, bisected by the Merced River from east to west, consists of 318 acres of historic floodplains covered by dredge tailings (Figure 3 and 4, Appendix D). The site was purchased with CALFED funds (Merced River Ranch Land Acquisition and Development, CALFED project

number 1998-C04). All property transactions will be completed and the project site will be in the ownership of the CDFG by summer 2000. This property acquisition was considered Phase I in the 1998 CALFED funded project.

The proposed Merced River Ranch Restoration Project is a multi-objective project that addresses restoration of natural channel dynamics, sediment transport using alternative aggregate sources, and natural riparian vegetation processes (Whitlow and Bahre 1984). The main objective of the project is to design the reconstruction of channel, floodplain, and associated upland terrace habitats on a reach of the Merced River near Snelling, California while using excess dredge tailings for restoration purposes (Figures 2 and 3, Appendix D). Watershed-level geomorphic and ecological models recently developed for the Merced River will be used to design the restoration with respect to the geomorphic context of the site under the current river hydrologic regime. Other project objectives include design of re-vegetation of riparian and upland habitats and in-stream gravel augmentation for enhancement of spawning habitat on the project site (Kondolf and Wolman 1993; Kondolf 2000). These restoration designs are expected to increase areas of native riparian and upland plant communities which would potentially benefit special status species in the Merced River Watershed, including valley elderberry longhorn beetle, riparian brush rabbit, riparian woodrat, San Joaquin pocket mouse, least Bell's vireo, little willow flycatcher, western yellow-billed cuckoo, Swainson's hawk, osprey (existing nest on site), fall-run chinook salmon, late fall-run chinook salmon, and steelhead trout. The Project Team proposes to demonstrate this restoration design on a portion of the site in the proposed pilot project.

To achieve these objectives (i.e., to restore the property acquired in Phase I), the Project Team proposes two additional phases (Phase II and III). Phase II consists of the preliminary restoration design and planning phase for the entire 318 acre property. The Project Team has identified four goals (tasks) that will be addressed in this phase of the project over a two year time period (2001-2002). These goals include: (1) preliminary restoration design for the entire property (task 1), (2) environmental documentation (task 2), (3) permitting (task 3), and (4) a final restoration design for the pilot project only (task 4). Phase III of the proposed Merced River Ranch Restoration project is implementation of a pilot restoration project involving restoration of 60 acres of floodplain and in-stream habitat within the project site (Figure 5, Appendix D). Two goals are associated with this phase: (1) reconstruction of floodplain and in-stream habitat along the riparian corridor of the Merced River on the project site (task 5), and (2) long-term monitoring of physical and ecological processes before, during, and after restoration of this area.

### **Conceptual Model**

The conceptual model for the Merced River corridor ecosystem under the current regulated flow regime includes key factors of hydrology; sediment transport; and biological interactions between riparian plant communities and animals. A flow chart of our conceptual model of the current ecosystem is depicted in Figure 6 showing key factors and their interactions (Appendix D). Processes that we will attempt to restore to more natural conditions under the proposed restoration design and pilot project are highlighted. Restoration will be designed within the geomorphic context of the entire river ecosystem based on current regulated flow conditions. This model will be the basis for decisions made in the adaptive management process throughout the project.

### **Hypotheses to be Tested**

Several hypotheses will be tested in this proposed project. The main hypothesis associated with the floodplain reconstruction is that the reconstruction design used will not become unstable (significant scour and/or deposition) during/after large storm events nor create a floodway impedance. This hypothesis will be tested by monitoring approximately 10 cross-sections of the floodplain/in-stream restoration, a thalweg profile, and scour chains before, during and after reconstruction. Special attention will be given to bed material placement and movement (Kondolf et. al., 1996). The Project Team will use a factorial experimental design approach that will allow for testing of ecological hypotheses.

Following floodplain reconstruction, treatment plots will be established within distinct geomorphologic units to test variation between the following factors thought to be instrumental in restoring natural fluvial geomorphologic and ecological processes in the riparian floodplain and channel areas: soil profile (various mixtures of gravel and soil); vegetation (natural riparian vegetation recruitment versus planting and vary different species planted by elevation/soil moisture); and spawning redds (location, dimensions, gravel size). For all factorial analyses, the null hypotheses states that there is no significant difference when the above factors are varied. In addition, we will test the difference in the presence and abundance of all life stages of chinook salmon and steelhead in all restored habitats (i.e., floodplain backwaters and channel habitats) compared to existing habitats.

### **Adaptive Management**

The success of stream corridor restoration projects can be highly variable and uncertain. The Project Team seeks to learn from the proposed Merced River Ranch Restoration project using adaptive management framework and experimental techniques (Figure 6, Appendix D). Uncertainties in geomorphic and ecological processes under the current hydrologic regime on the regulated section of the Merced River led to the project approach and design. Even the best plans have unforeseen problems and can require mid-course corrections. Adaptive management will allow changes in understanding of these processes during the project duration to be applied immediately to be more effective and to further advance our knowledge base. During the length of the project we will incorporate and respond to any new advances in restoration and design techniques to improve success of the project and maximize information value of the restoration. Any advances generated during the project (at all stages) will be used and applied to the project design, construction, and/or monitoring.

### **Proposed Scope of Work**

#### **Location and Geographic Project Boundaries**

The proposed Merced River Ranch Restoration project site is a 318 acre parcel located in northeastern Merced County, approximately 4 kilometers (2.5 miles) east of the town of Snelling (Figure 1). Specifically, the project site is located on the Snelling, California USGS 7.5' quadrangle (N 37° 32' 15", W 120° 23' 25"; Township 5 South, Range 14 East, Sections 11 and 12)(Figures 2 and 3). The site is located in the CALFED's East San Joaquin (number 13.3) ecological management zone of the Bay-Delta Watershed. The parcel (Merced County Assessor's Parcel Number 43-06-0-11) spans the Merced River, with the majority of the parcel on the south side of the river, and 18 acres on the north side (Figure 3, Appendix D).

#### **Project Approach and Objectives**

This section describes our project approach to develop site specific restoration plans for the entire Merced River Ranch property, including the design and implementation of a pilot project. The primary project objective is to use an ecological emphasis when designing restoration of stream corridor habitats by considering the interactions of hydrology, river hydraulics and geomorphology, and vegetation community processes. The project will be designed within the context of current hydrologic and geomorphic regimes in this reach of the Merced River. Generally, the widest most continuous stream corridor (channel, floodplains and uplands) results in the greatest diversity and long-term stability of an ecosystem (Federal Interagency Stream Restoration Work Group 1998). Frequently, however, land constraints limit our ability to provide the continuum we seek. The Merced River Ranch property is not limited in width and contains a riparian corridor, historic floodplains, wetlands, and uplands.

Another main project objective is to develop a restoration design that is fully integrated into the local and regional restoration planning efforts. The Project Team will accomplish this by coordinating with the Merced River TAC and Stakeholder Group to integrate into local and regional plans, especially those restoration plans and guidelines being developed for the lower Merced River by the Merced River

Corridor Restoration Project funded by CALFED. Phase III of this project is currently underway and is developing a regional restoration plan for the Merced River corridor from Crocker-Huffman Dam (RM 52) to the San Joaquin River (RM 0). The plan focuses on establishing geomorphic and ecological guidelines for long-term, sustainable improvements in ecosystem function along this reach of the Merced River. These guidelines include design criteria for channel and floodplain dimensions and connectivity; bed mobility thresholds; a coarse sediment management plan; and a study of riparian and floodplain habitat relationships to river dynamics. The Merced River Ranch site provides an opportunity to implement and begin testing these guidelines.

Our project approach is divided into three main Phases (Phase I, II, and III) and then subdivided further into 6 primary goals (tasks) - preliminary restoration design, permitting, environmental documentation, final design for a pilot project, implementation of the pilot project, and long-term monitoring. Currently funded by CALFED, Phase I is the acquisition of the Merced River Ranch property which will be completed by summer 2000. Phase II includes Tasks 1-4, and Phase III consists of Task 5 and 6. Tasks contained within each of the two phases must be completed together. This proposal seeks funding for both Phase II and III of the Merced River Ranch Restoration (next-phase) project.

## **Phase II**

### **Task 1 – Preliminary Restoration Design**

Preliminary designs will provide sufficient detail to prepare environmental documentation and permits for restoration of the entire 318-acre Merced River Ranch site. The preliminary design process includes developing clear goals and objectives, determining the desired outcome, collection of data and review of literature, developing conceptual designs, obtaining Merced River TAC and Stakeholder review and comments, and completing preliminary design drawings and specifications for the site.

URS has initiated some data gathering at the Merced River Ranch as part of mitigation planning for Caltrans State Route 59 Bridge Replacement Project. These efforts have included habitat mapping for the entire property and a survey of four cross-sections of the Merced River. Elevation and vegetation was sampled along each cross-section (Figure 8, Appendix D). These data helped to facilitate planning level estimates of existing floodplain elevations, widths, and inundation areas on the property. From this work, the volume of dredge tailings to be removed for the pilot restoration project and costs associated with restoration were estimated. Task 1 proposes that additional river cross section data (approximately four cross-sections/transects within the property, one upstream, and one downstream) be collected to accurately perform river hydraulics and sediment transport analyses. Although the composition of dredge tailings is highly variable, a sub-surface investigation will be conducted to obtain size distributions and approximate percentage of usable material for on-site restoration (Kondolf et. al. 1996; Kondolf 2000). Specifically this investigation will assess the availability of fish spawning gravel, groundwater elevations, and soil conditions for re-vegetation.

An intermediate product to be presented to the Merced River TAC and Stakeholder Group is a conceptual model or plan. The conceptual model will summarize restoration goals and objectives, discuss constraints (physical, property limits, etc.), and show a general site layout (e.g., pool/riffle, wetlands, and riparian and upland forests). The conceptual plan will also describe potential channel and floodplain modifications, spawning gravel sizes and locations for placement, and re-vegetation plans for the riparian corridor and floodplain (Whitlow and Bahre 1984). The conceptual plan will discuss the linkages between physical, chemical and biological components of the ecosystem and outline the parameters to be used to assess performance. Comments and design suggestions will be incorporated into a preliminary design submittal. The preliminary design will again be presented to the TAC and Stakeholder Group for review and comment. The preliminary design will also be used to support the environmental documentation and permit applications.



A hydraulic and sediment transport model will be applied to this reach of the Merced River. Analyses will be completed to determine the most probable stable channel dimensions under a range of hydrologic and sediment supply scenarios. A model is currently being developed and calibrated by Stillwater Sciences on a small reach of the Merced River near Snelling, CA. Our approach will integrate river hydraulics and sediment transport conditions such that the design channel is able maintain a balance between the incoming sediment load and transport through the site without aggregation or degradation of the river bed.

The natural diversity characteristic of floodplain communities is caused primarily due to the influence of periodic flooding of natural flow regimes. Our hydraulic assessment will include an analysis of floodplain inundation and the frequency and duration of such events. Vegetation planting selection, distribution, and management plans will be developed in coordination with site specific floodplain hydrodynamics, other restoration projects in the watershed, and according to the models developed in the Merced River Corridor Restoration Phase (CALFED 2000-F05).

A conceptual vegetation planting program will also be developed for the entire Merced River Ranch property under Task 1. The program will include a conceptual vegetation planting design/plan and temporary irrigation plan for native willows and cottonwoods (and other desired species) to be planted on the floodplains and upland terraces of the entire 318 acre Merced River Ranch property.

Developing the framework of a monitoring plan is an integral part of the planning process. In this task, linkages between restoration goals and monitoring parameters will be identified and a set of performance standards (criteria) developed to assess the project's success. Monitoring of geomorphologic processes, vegetation success and recruitment, animals of special concern, groundwater levels, and water chemistry on the project site will be conducted at all stages of the project. Baseline geomorphology and vegetation studies have begun on the Merced River Ranch property and will continue in 2000. Baseline data provides an important data set to evaluate existing condition, develop restoration plans, and judge the projects future success.

The following analyses are anticipated under this task:

- ❑ A hydrologic and hydraulic analysis addressing a range of river flow rates including the channel forming discharge and extreme events.
- ❑ A sediment transport analysis evaluating bed mobility, transport rates, and supply needs. Guidelines on sediment size, supply and mobility are currently being developed as part of the Merced River Restoration Project.
- ❑ An analysis of channel stability under a range of flow rates and sediment supply conditions. This analysis will assess degradation and aggregation of the river bed, bank stability, and the potential for floodplain deposits (or scour).
- ❑ An analysis of floodplain inundation elevations, frequency, and duration for re-vegetation plans.
- ❑ An analysis of the riparian and upland plant species and factors thought to contribute to their success/growth.

We anticipate that the preliminary design will include the following details:

- ❑ Proposed site layout including channel alignment, riparian areas, wetland areas, upland areas.
- ❑ A grading plan, an estimate of on-site spawning gravel available, and the amount to be purchased.
- ❑ Longitudinal profile, including slope, pool and riffle spacing.
- ❑ Channel dimensions (e.g., widths and depths).
- ❑ Floodplain widths, elevations and expected inundation areas.
- ❑ A sediment management plan (e.g., size distributions, supply volume and frequency).
- ❑ Riparian and upland habitat re-vegetation plans, including a planting palette and irrigation design.
- ❑ Sub-surface investigation results.

## **Task 2 – Environmental Documentation**

The Project Team will prepare NEPA and CEQA environmental documentation for restoration of the entire Merced River Ranch property. We anticipate the CEQA compliance will be an Initial Study-Negative Declaration and the NEPA compliance will be an Environmental Assessment-FONSI. The NEPA-CEQA document preparation will include two drafts (administrative and public drafts) and a final document.

The Initial Study/Environmental Assessment will present the findings of specific technical studies. We assume that the preliminary design will be adequate to describe the proposed project, purpose, and need. The environmental document will specifically address potential impacts related to air quality, hydrology and flooding, noise, geology/seismic risk, biological resources, agricultural lands, cultural resources, hazardous waste site assessment, land use, growth, utilities, traffic, and scenic/visual resources. Focused surveys will be conducted to assess impacts to biological and cultural resources. Focused surveys will include a jurisdictional wetland delineation, habitat assessments for special status species, a cultural resource records search and field survey. We assume that existing information will be adequate to address potential impacts related to air quality, hydrology/flooding, noise, and geology/seismic risk and that the scenic and visual resource evaluation will not require visual simulations. The hazardous waste site assessment will consist of a site visit and a database search. The proposed restoration project will not require traffic modeling or traffic data collection.

The Project Team will prepare 10 copies of the administrative draft IS/EA. A public draft of the IS/EA will be prepared based on comments received on the administrative draft. We assume that 200 copies of the public draft will be produced for circulation. We will present the proposed restoration project and discuss the public draft of the IS/EA with the Merced River stakeholders group and the TAC. Public comments will be addressed in the Final Negative Declaration/FONSI.

## **Task 3 – Permitting**

We will prepare the permit applications and coordinate permitting for the Corps of Engineers Section 404 permit, the CDFG Streambed Alteration Agreement, the Regional Water Quality Control Board's Section 401 Water Quality Certification, and a State Reclamation Board permit. A biological assessment will be prepared for Section 7 consultation with U.S. Fish and Wildlife Service. We assume that the preliminary restoration plan will incorporate mitigation plans for potential impacts to biological resources.

## **Task 4 – Final Restoration Designs for the Pilot Project**

The analysis described under Preliminary Designs task will be refined, and design drawings and specification developed. TAC and Stakeholder review comments and design suggestions of the preliminary design will be incorporated into a draft design submittal. Construction cost estimates and schedule will be provided. Staging areas, access, and best management practices for construction activities will be described.

Natural river dimensions (widths, depths, slope etc.) and habitat types along the Merced River vary continuously along its alignment. Average values are traditionally used for design purposes in the above analyses. Under the proposed project approach, a range of values for most parameters will be carried through the design process. To the extent practical, the final design will incorporate a variety of dimensions, elevations, and habitat types to create the most natural and diverse ecological conditions. This draft design submittal will be reviewed, and any comments will again be incorporated into a final design of the Merced River Ranch Restoration pilot project.

## **Phase III**

## **Task 5 – Pilot Restoration Project Implementation**

Task 5 consists of implementation of the final pilot restoration design on a 60-acre portion of the Merced River Ranch Restoration Project (Figure 5, Appendix D). The proposed pilot project consists of

excavating dredge tailings beginning at the river's edge and within the inside floodplain of the meander bends (Figure 5). This configuration provides the greatest opportunity to develop a diverse ecosystem, while minimizing costs and scale of a pilot project. This project includes reconstruction and restoration of approximately 60 acres of floodplain (split between the right and left floodplain) and 3600 feet of river channel. As time and money permit, the remaining 228 acres may be used to supply gravel for future restoration efforts in the region and could then be restored.

Construction activities consists of site preparation, excavating dredge tailings, grading the floodplain to design elevations, placement of in-stream gravel, shaping the channel to design specifications, replanting the riparian corridor, frequent site inspections, and the installation of monitoring equipment. In addition, monitoring will be conducted on-site during the construction activities to ensure that the restoration work is completed as designed and to protect water quality and protected habitats.

### **Task 6 – Long-term Monitoring**

Task 6 will complete the first year of long-term monitoring of the pilot restoration project success. Specifically, the following processes and species will be monitored according to the final monitoring plans developed in Task 5: river flow/hydrology, geomorphology, vegetation, species of special concern, and groundwater levels/soil moisture content. Success of each parameter will be measured using specific performance criteria developed in Tasks 1 and 5. We envision the next phase of the project (Phase IV) to be long-term monitoring of restoration success for at least 10 years. Lessons learned from monitoring throughout project implementation and the first year of monitoring will be applied to the long-term monitoring plan. This proposal does not seek funding for Phase IV at this time. The DFG plans to manage monitoring of the restoration over the long-term and continue to replenish spawning gravel upstream of the pilot project as needed on a long-term basis.

### **Monitoring and Assessment Plans**

A successful restoration does not stop after construction of a restoration project, but requires careful consideration of potential evolutionary changes and incorporating monitoring, evaluation, and adaptive management (Kondolf 1995; Kondolf and Micheli 1995). A monitoring plan will be developed that provides information to assess the success of the restoration project. Success is determined by assessing the following questions: is the project meeting the site specific goals and objectives? Is the project meeting local and regional goals and objectives?

Merced River flow must be monitored continuously to assess all aspects for this project. River flow is the fundamental factor upon which all other factors are dependent (geomorphology, plant communities, and aquatic and riparian habitat processes). Existing river flow gaging stations are sufficient for monitoring. Coordination with the collection of data at these gages will be required.

Long-term fluvial geomorphic monitoring is also required. Geomorphic monitoring may consist of visual inspection (photo inspection), re-surveying channel cross sections, placement of tracer gravel, and installation of scour chains and bank pins. Visual inspection can take place several times in a year – primarily after large storm events. Measurements obtained from re-surveys, tracer gravel movement, and river bed and bank changes are best completed once per year during low river flow periods.

### **Data Handling and Storage**

The Project Team has a wide array of GIS and database expertise that will be used in the project to manage and store data. We anticipate using MS Access, or Excel, and ArcView to store, manipulate, manage, and present data for quarterly and final reports.

### **Expected Products/Outcomes**

The following is a list of reports, designs, and permits that will be produced during this project. In addition, information will be transferred to the Merced River Technical Advisory Committee and

Stakeholder group through workshops at major milestones. Quarterly fiscal and programmatic reports will be submitted to CALFED as requested.

### **Preliminary Designs (Site Specific)**

- ❑ Conceptual plan
- ❑ Results of baseline surveys
- ❑ Proposed riparian and upland re-vegetation plans
- ❑ Proposed sediment management plan
- ❑ Preliminary restoration designs and specifications
- ❑ Monitoring plan and performance criteria

### **Environmental Documents**

- ❑ Topographic survey of property
- ❑ Jurisdictional wetland delineation and associated documents
- ❑ Biological Assessment
- ❑ Draft Initial Study/Environmental Assessment
- ❑ Final Negative Declaration/Finding of No-Significant-Impact (FONSI)
- ❑ Maps and figures

### **Permits**

- ❑ Federal, state, and local permits (see Task 3)

### **Final Design**

- ❑ Eighty-percent restoration design drawings and specifications
- ❑ Final riparian and upland re-vegetation drawings and specifications (including final irrigation plan)
- ❑ Final sediment management plan
- ❑ Final construction drawings and specifications
- ❑ Detailed construction cost estimate and schedule
- ❑ Construction best management practices for water quality and habitat protection

### **Long-Term Monitoring Report**

- ❑ River flow study – stage-discharge relationship
- ❑ Geomorphology study – cross-sections, thalweg, tracer gravel, scour chains
- ❑ Vegetation study – planting success, recruitment/establishment, native/non-native
- ❑ Species of special concern study – protected species survey, redd survey
- ❑ Groundwater study – levels in relation to plant roots of various species, water chemistry (for mercury)

### **Work Schedule**

The work schedule for this project is organized by task and presented in Table 1 (Appendix E).

### **Feasibility**

The Project Team believes that the technical approach and timing described in this proposal are feasible. Throughout Phases II and III of the project, coordination with the Merced River Stakeholder Group and the Technical Advisory Committee will insure that public, stakeholder, and agency concerns are addressed early in the planning and design process and the project uses the most feasible restoration design plan possible. Exact timing of Phase III will depend on receipt of required permits marked on the environmental checklist and described in the description of the permitting task (Task 4). Since our project approach is new, we anticipate some unpredictability, especially related to exact timing of the restoration implementation phase (Phase III). However, we are confident that we will succeed by using adaptive management strategies throughout the design and implementation phases of this project.

## APPLICABILITY TO CALFED ERP GOALS AND IMPLEMENTATION PLAN AND CVPIA PRIORITIES

### CALFED ERP Goals and CVPIA Priorities

The CALFED Ecological Restoration Program Plan (ERPP) vision for the Merced River Ecological Management Unit of the East San Joaquin Basin Management Zone is focused on improving habitat for fall-run chinook salmon, late-fall-run chinook salmon, steelhead, riparian vegetation, and wildlife resources. The ERPP vision also includes restoration of the important ecological functions and processes that will improve habitat for chinook salmon, steelhead, native amphibians and reptiles, riparian vegetation, and other wildlife resources. The ERPP presents important measures needed to achieve the vision: restoring more natural channel configurations; restoring gravel recruitment, transport and cleansing processes; restoring a balanced fine sediment budget by implementing improved land use and livestock grazing practices; reducing non-native fish habitat; reducing the loss of young salmon at water diversions; reducing the input of contaminants; reducing the number of adult fish straying into areas with no suitable spawning habitat; and reducing illegal salmon harvest.

The proposed Merced River Ranch restoration plan and pilot project will use the results of hydrologic, hydraulic, sediment supply and transport, and floodplain and riparian habitat evaluations conducted by Stillwater Sciences to restore a functioning riverine ecosystem at the project site. The Merced River Ranch restoration project will specifically address the following ERPP goals:

- **Functional channel and floodplain configuration** – The plan will utilize and test design criteria developed as part of the CALFED-funded Merced River Corridor Restoration Project. Pilot project design will incorporate geomorphically functional channel and floodplain dimensions that will enhance aquatic and riparian habitats.
- **Restoration of gravel recruitment, transport, and cleansing processes** – The pilot project will be designed using the calibrated Merced River sediment transport model developed by Stillwater Sciences using CALFED funding. The river channel in the project area will be designed to promote frequent bed mobilization and a monitoring program will be implemented to evaluate the efficacy of the design.
- **Reducing non-native fish habitat** – Reconstruction of functional channel dimensions in the project area is expected to reduce habitat suitability for largemouth bass, a non-native species that preys on juvenile salmon.
- **Riparian and floodplain habitats** – Riparian and wetland vegetation on the Merced River Ranch is currently limited to narrow bands along the river and ponded depressions created by the dredge operations. The restoration plan for the property will create additional floodplain habitats including riparian forest, riparian scrub, and emergent freshwater marsh.
- **Meander belt width and floodplain connectivity** – The project design will incorporate an appropriate width of a geomorphically functional meander belt and suitable floodplain widths to convey high flows and support riparian and floodplain habitat. This design will incorporate recommendations developed by Stillwater Sciences using CALFED funding. A monitoring program will be implemented to evaluate the performance of the design.

### Relationship to Other Ecosystem Restoration Projects

Implementation of a pilot restoration project at the Merced River Ranch is supported by key members of the Merced River Stakeholder Group and the Merced River Technical Advisory Committee (TAC). Supporting members are summarized in Table 5(Appendix H). Dredged lands along the Merced River have been identified as potential sources of aggregate and potential sites for river and floodplain restoration. CALFED funded acquisition of 318 acres of dredged lands in 1997 for the purposes of protection, enhancement, and restoration of riparian, wetland, and aquatic habitats. California

Department of Fish and Game is currently acquiring this property that is locally known as the Merced River Ranch.

This project would utilize and test recommendations and models developed by Stillwater Sciences and funded by CALFED as part of the Merced River Corridor Restoration Project and the Mechanistic Approach to Riparian Restoration in the San Joaquin Basin. The Merced River Corridor Restoration Project, funded by CALFED and the U.S. Fish and Wildlife Service Anadromous Fish Restoration Program (AFRP), is a three-phased restoration planning project. Phase I was funded by the AFRP and established a Merced River Stakeholder Group and TAC. Phase II was funded by CALFED and includes working with the Stakeholder Group and TAC to complete baseline geomorphic and ecological analyses and identify social, infrastructure, and institutional issues and concerns that will define opportunities and constraints for restoration in the Merced River corridor. Phase III was funded to carry forward work completed in Phases I and II and develop a comprehensive restoration plan for the 52-mile Merced River corridor.

Design for the Merced River Ranch project is also coordinated with other restoration and evaluation efforts currently underway in the watershed. These efforts include a ten-year study program currently being developed by MID and DFG to assess chinook salmon population dynamics in the river, and a large-scale channel reconstruction project currently being developed and implemented by DFG and Department of Water Resources (DWR) (with funding from the Four Pumps Agreement and CALFED).

The findings and recommendations derived from evaluating the performance of the proposed project will provide important information and guidance to assist the Merced County Planning and Community Development Department. Merced County regulates aggregate mining and oversees the application of the County General Plan, which defines land use and resource management policies in the County. The General Plan directs the County to protect, enhance, and restore wetland and riparian areas that provide habitat to rare and endangered species and to ensure that the County's mineral resources are utilized in a way that does not compromise County open space and habitat resources. Review of aggregate mining proposals, specifically reclamation proposals, will benefit from the proposed project.

### **Requests for Next-Phase Funding**

The current status of Phase I of this project (Merced River Ranch Acquisition and Restoration, CALFED project number 97-H122) is described in Appendix F. The property boundaries of the Merced River Ranch are shown on Figure 2 of the original CALFED proposal (number 97-H122) and is included in Appendix F.

### **Previous Recipients of CALFED or CVPIA Funding**

Table 2 lists the CALFED and CVPIA projects (project titles and numbers) in which members of the Project Team have received (Appendix E). The current status, progress, and accomplishments of each project are included.

### **System-Wide Ecosystem Benefits**

Completion of the Merced River Ranch Restoration Project will provide ecosystem benefits throughout the Merced River corridor. The proposed pilot project will evaluate the design criteria for restoration of geomorphically functional channel and floodplain dimensions and riparian habitat establishment in the mined reaches of the Merced River. These benefits will contribute to incremental, system-wide ecosystem benefits derived from on-going planning and implementation of restoration on the Merced River and in eastern Merced County that provide a substantial opportunity to improve geomorphic processes and ecological conditions in the San Joaquin Basin.

## QUALIFICATIONS

### Project Team Structure

The Project Team consists of URS Woodward Clyde, the California Department of Fish and Game, and Stillwater Sciences. The CDFG will assist in coordination with the Merced River Stakeholder Group and Technical Advisory Committee, and other local interests. In addition, they will provide technical oversight and management. The CDFG owns the Merced River Ranch property and will be responsible for maintaining the restoration project in perpetuity and replenishing spawning gravels (per the Project Team design) as needed on a regular basis. URS will be the CALFED contractee and will be responsible for payments, reporting, and accounting. Stillwater will assist throughout the project on issues related to fisheries and geomorphology and other technical issues described below.

The lead management team will consist of Rhonda Reed (CDFG), Gretchen Coffman (URS), Steve Leach (URS), and Jennifer Vick (Stillwater). The team leaders will be assisted by staff members with extensive experience in the San Joaquin Basin, and specifically the Merced River Watershed. Projects completed or underway by team members include conceptual riparian restoration planning in the San Joaquin Basin; preparation of environmental documentation (CEQA/NEPA) for riparian restoration projects involving augmentation to regulated flows and other restoration projects on the Tuolumne and Merced Rivers. Resumes of team leaders and staff are available upon request.

### California Department of Fish and Game

**Rhonda Reed:** Ms. Reed is an ecologist (M.S. Ecology; B.S. Wildlife and Fisheries Biology) currently serving as liaison for CDFG and U.S. Fish and Wildlife Service working on the Anadromous Fish Restoration Program (AFRP) to implement habitat restoration projects to increase natural production of anadromous fish in the San Joaquin River system and its tributaries. From 1991-1998 she lead CDFG to enhance endangered species recovery through development and implementation of multi-species habitat conservation plans, in Kern County, the Western Mojave Desert, and Metropolitan Bakersfield areas. The remainder of her more than 19 years with CDFG includes commercial fishing gear evaluations to resolve sport/commercial use disputes; reservoir fishery assessments; education and outreach; and population studies of the Santa Cruz long-toed salamander addressing land use conflicts.

### URS Woodward Clyde

**Gretchen Coffman:** Ms. Coffman is a wetland and riparian ecologist with 10 years of experience in the field of restoration ecology. She has a B.A. in biology, a M.A. in plant ecology, and is finishing a Ph.D. in environmental sciences, focusing on nutrient relations of plants used in riparian restoration. She has worked on restoration of rivers, streams and wetlands throughout the U.S., concentrating for the last five years on riparian restoration in California. She has experience in experimental design, re-vegetation design, planning, and implementation of large restoration projects; and organization of community involvement and teaching in the field of restoration ecology. Ms. Coffman will take the lead role in the experimental design, re-vegetation planning and design, and implementation on this project.

**Steve Kellogg:** Mr. Kellogg is an ecologist with a B.S. in biology and a M.S. in ecology and 25 years of experience in his field. He has experience in restoration and mitigation planning in a variety of habitats including riparian, seasonal wetland, estuarine wetlands, and vernal pool habitats. He has successfully managed several projects involving restoration, watershed analysis and river ecosystem issues. His Central Valley experience includes, the Grassland Bypass EIS/EIR, CALFED analyses for Vegetation and Wildlife Technical Report and EIS/EIR, and the Route 59 Merced River Mitigation and Restoration Planning Project. Mr. Kellogg will be a technical advisor for the project and the main contact for this project.

**Steve Leach:** Mr. Leach is a wetland and riparian ecologist with a B.S. in physical geography and an M.S. in Vegetation Ecology. He has developed riparian restoration plans for projects on the Stanislaus, Merced, and San Joaquin rivers. His areas of expertise include vegetation community classification and mapping, wetland delineation, riparian community ecology, and environmental documentation and permitting. Mr. Leach is currently managing the environmental documentation and permitting for three projects on the Merced River and has completed studies for more than ten projects in Merced County during the past three years. Mr. Leach also assisted with permitting and documentation for the Merced River restoration projects currently being implemented by DFG and DWR near the State Route 59 bridge. He is an active participant in the Merced River Technical Advisory Committee. Mr. Leach will lead the environmental documentation and permitting efforts for this project.

**Gary Palhegyi, P.E.:** Mr. Palhegyi is an environmental engineer and geomorphologist. He has a B.S. in environmental engineering and a M.S. in environmental water resources. Mr. Palhegyi's has 13 years of experience in environmental fluid mechanics emphasizing surface water hydrology, river flow dynamics and sediment transport mechanics. Mr. Palhegyi has completed several fluvial geomorphic assessments and stream rehabilitation designs and specifications. Mr. Palhegyi is currently planning stream stabilization control measures for San Leandro Creek as part of the San Leandro Creek Watershed CRMP. He has completed designs and specifications for bed and bank stabilization measures along Ward Creek in the Tahoe National Forest. A hydrologic and fluvial geomorphic assessment were completed, channel geometry and floodplain connectivity were modified. Mr. Palhegyi will take the lead role in hydrology and geomorphology design and implementation during this project.

### Stillwater Sciences

**Jennifer Vick:** Ms. Vick an aquatic ecologist and geomorphologist. Her experience ranges from assessing microhabitat partitioning of fishes to evaluating geomorphic and hydrologic impacts of dams. She conducted her research for her masters thesis on the Merced River, including extensive field surveys and coordination with state and local agencies, MID, and local landowners in the Merced River corridor.

### Peer Reviewers

The primary peer reviewers selected for this project will be Scott McBain of McBain and Trush, and Doug Sovern of URS Woodward Clyde. In addition, workshops will be conducted for the Merced River TAC and Stakeholder Groups to exchange relevant information regarding development of the restoration plan, design, and implementation.

**Scott McBain:** Mr. McBain is a hydraulic engineer/fluvial geomorphologist whose interests include bed mobility, bedload transport, effects of high flows on channel morphology, watershed sediment yields, and stream restoration. He has work extensively on the Tuolumne River, including the development of the Tuolumne River Corridor Restoration Plan.

**Doug Sovern, P.E.:** Mr. Sovern is a water resources engineer focusing on restoration of rivers and streams with over 33 years of experience. He has a B.S. in civil engineering and a M.S. in hydraulics. His areas of expertise include stream rehabilitation; hydraulic design structures for streams and dams, multi-objective corridor steam planning; planning and designing of urban drainage and flood control projects; sediment transport and erosion control; treatment of stormwater; and policy development in these fields. He has worked on over 100 stream restoration projects. Mr. Sovern will be a technical advisor in the areas of hydrology and geomorphology for this project.



## **COST**

### **Budget**

The total cost of Phase II is \$535,361 and Phase III is \$2,613,637. A detailed budget for each year we are seeking support (2001-2003) is presented in Table 3 – Annual Budget (Appendix G). Support requested for the overall project period (2001-2003) is summarized in Table 4 – Task Summary Budget (Appendix G). Benefits and overhead shown in Tables 3 and 4 apply to salaries (direct labor). Overhead includes indirect labor; administrative, financial and legal; facility costs; internal services; telephone/utilities; insurance/permits; travel/relocation; operating expenses; and fee. Service contracts would include Stillwater Sciences (Preliminary and Final Restoration Design - Tasks 1 and 3), Radman Aerial Surveys (Topographic Survey – Subtask 2a), and labor costs for California Department of Fish and Game staff participation throughout all of the proposed tasks. These costs are shown under service contracts in Tables 3 and 4. Other service contracts include representative bids from other subcontractors for Task 5 – Pilot Project Construction.

### **Cost-Sharing**

Approximately \$50,000 is allocated from the CVPIA Anadromous Fish Restoration Program (00LD10) for URS Woodward Clyde to initiate preliminary planning efforts on the Merced River Ranch Restoration project in 2000. Included in this preliminary planning stage are the following tasks:

- Kick-off meeting
- Literature review
- Data review, including review of regional models developed for geomorphology and vegetation (CALFED project numbers 2000-F04 and 2000-F05)
- Additional baseline field data collection
- Technical and peer review
- Merced River TAC and Stakeholder group review

These tasks will be completed by spring of 2001 and will assure that the Project Team is ready to start working on Tasks 1-6 (Table 3, Appendix G) if CALFED funding is granted.

## **LOCAL INVOLVEMENT**

Public and stakeholder support and participation are important components of this project and are crucial for developing and implementing restoration plans. All phases of the project include an active public outreach and stakeholder coordination component, which will be achieved through public workshops and coordination with the Merced River Stakeholder Group and Technical Advisory Committee (TAC). The TAC consists of technical experts in the fields of geology, biology, ecology, and engineering that are directly involved in planning and implementation of restoration projects on the Merced River or managing the physical and biological resources of the Merced River. The TAC facilitates communication between the various agencies and districts and will provide technical input to and review of plans and environmental documents prepared for the Merced River Ranch project.

Table 5 summarizes the agencies and individuals that are currently participating in the TAC and their expertise. This table also indicates TAC participants who were contacted during preparation of this proposal and indicates whether they are supportive of the proposed project. An overview of the Merced River Ranch restoration project was presented at the most recent meeting of the Merced River TAC held in Snelling on February 2, 2000. Response from the participants was very positive, including many

people who offered to contribute time to the project and coordinate field visits to private properties where dredge tailings had been removed and successfully restored.

### **Letters of Support**

Appendix H includes a table (Table 5) of groups and individuals who may be affected by the project and if they support/oppose the project. The Project Team received letters of support for this project from the following nearby landowners or organizations (letters are located in Appendix H).

### **Potential Third Party Impacts**

The Project Team is actively coordinating with the Merced River Stakeholder Group, Merced River TAC, and the public to ensure that all potential third party impacts are identified and avoided.

## **COMPLIANCE WITH STANDARD TERMS AND CONDITIONS**

The applicants have reviewed and agree to the Federal and State of California standard terms and conditions described in Attachment D and E of the CALFED BAY-DELTA PROGRAM 2001 Proposal Solicitation Package with the following exceptions.

- We have added "...to the extent caused by the negligence, errors, omissions, breach of contract or willful misconduct of Grantee, its employees or subs" to the end of Number 11 of the Terms and Conditions for State Proposition 204 Funds.
- We have also added a "force majeure" statement to Number 19 of the Terms and Conditions for State Proposition 204 Funds. "Neither party shall hold the other responsible for damages or delays in performance caused by force majeure, acts of God, or other events entirely beyond the control of the other party or that could not have been reasonably foreseen or prevented. For this purpose, such acts or events shall include, without limitations, unusual weather affecting performance, floods, epidemics, war, riots, strikes, lockouts or other industrial disturbances, protest demonstrations, and unanticipated site conditions. Should such acts or events occur, both parties shall use their best efforts to overcome the difficulties and to resume as soon as reasonably possible the normal pursuit of the Services. Delays within the scope of this Article which cumulatively exceed forty-five (45) days shall, at the option of either party, make this Agreement subject to termination for convenience or to renegotiations."

Appendix I contains forms required for submittal with this proposal.

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**Appendix A**  
**Letters of Notification**



May 15, 2000

Mr. Kevin Faulkenberry  
Department of Water Resources  
3374 E. Shields Ave.  
Fresno, CA 93726

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Faulkenberry:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

- Preliminary design
- Documentation
- Permitting
- Final pilot project design
- Pilot restoration project
- Monitoring

Public review and comment would be solicited during project design and as part of the environmental review process. Preliminary designs would be presented to the Merced River Stakeholders Group, the Merced River Technical Advisory Committee (TAC) and at workshops organized as part of the CEQA and NEPA review process.

This effort would provide important benefits for fisheries habitat in the project area and provide feedback that would benefit other restoration projects in the Merced River watershed.

Sincerely,

**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Scott Spaulding  
U.S. Fish and Wildlife Service  
4001 N. Wilson Way  
Stockton, CA 95205

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Spaulding:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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This effort would provide important benefits for fisheries habitat in the project area and provide feedback that would benefit other restoration projects in the Merced River watershed.

Sincerely,

**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Ms. Jennifer Vick  
Stillwater Sciences  
2532 Durant Avenue  
Berkeley, CA 94704

Subject: **Merced River Ranch Pilot Project**

Dear Ms. Vick:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG), in cooperation with Stillwater Sciences, propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Sincerely,

**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Ms. Michelle Langmaid  
Santa Fe Aggregates  
P.O. Box 3042  
Modesto, CA 95353

Subject: **Merced River Ranch Pilot Project**

Dear Ms. Langmaid:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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- Pilot restoration project
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This effort would provide important benefits for fisheries habitat in the project area and provide feedback that would benefit other restoration projects in the Merced River watershed.  
Sincerely,

**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268





May 15, 2000

Ms. Betty Yee  
Central Valley Water Quality Control Board  
3614 E. Ashlan Ave.  
Fresno, CA 97326

Subject: **Merced River Ranch Pilot Project**

Dear Ms. Yee

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

- Preliminary design
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- Permitting
- Final pilot project design
- Pilot restoration project
- Monitoring

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This effort would provide important benefits for fisheries habitat in the project area and provide feedback that would benefit other restoration projects in the Merced River watershed.

Sincerely,

**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Chris Robinson  
Robinson Ranch  
P.O. Box 10  
Merced, CA 95341

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Robinson:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

- Preliminary design
- Documentation
- Permitting
- Final pilot project design
- Pilot restoration project
- Monitoring

Public review and comment would be solicited during project design and as part of the environmental review process. Preliminary designs would be presented to the Merced River Stakeholders Group, the Merced River Technical Advisory Committee (TAC) and at workshops organized as part of the CEQA and NEPA review process.

This effort would provide important benefits for fisheries habitat in the project area and provide feedback that would benefit other restoration projects in the Merced River watershed.

Sincerely,

URS

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Jon Kelsey  
East Merced Resource Conservation District  
P.O. Box 324  
Snelling, CA 95369

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Kelsey:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
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Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Lloyd Pareira  
Merced River Riparian Water Users Association  
13700 N. Highway 59  
Merced, CA 95340

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Pareira:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Dennis Smith  
National Marine Fisheries Service  
777 Sonoma Ave.  
Santa Rosa, CA 95404

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Smith:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Ted Selb  
Merced Irrigation District  
P.O. Box 2288  
Merced, CA 95344

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Selb:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Bill Nicholson  
Assistant Director  
Merced County Planning and Community Development Department  
2222 M Street  
Merced, CA 95340

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Nicholson:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Ken Jensen  
Merced River Fly Fisherman's Association  
974 Idaho Dr.  
Merced, CA 95340

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Jensen:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268





May 15, 2000

Mr. Art Hardin  
Merced River Riparian Water Users Association  
9176 Banderilla Dr.  
La Grange, CA 95329

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Hardin:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Bob Edminster  
1073 Madison Avenue  
Los Banos, CA 93635

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Edminster:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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**URS**

Steve Kellogg  
Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000

Mr. Frank Anderson  
Merced River Riparian Water Users Association  
4747 W. Turlock Road  
Snelling, CA 95369

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Anderson:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Senior Project Manager

URS Corporation  
500 12th Street, Suite 200  
Oakland, CA 94607-4014  
Tel: 510.893.3600  
Fax: 510.874.3268



May 15, 2000  
Mr. Tanis Toland  
U.S. Army Corps of Engineers  
1325 J Street  
Sacramento, CA 95814-2922

Subject: **Merced River Ranch Pilot Project**

Dear Mr. Toland:

URS Greiner Woodward Clyde (URS) and California Department of Fish and Game (DFG) propose to develop a restoration plan and implement a pilot restoration project at the Merced River Ranch property in Merced County, California. The enclosed proposal has been submitted to CALFED for possible funding in 2000. Proposed actions include removal of gravel within the existing meander belt width of the Merced River, modification of the channel dimensions, and planting of the reconstructed floodplain. Six tasks are proposed for funding by CALFED:

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Senior Project Manager

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**Appendix B**  
**Environmental Compliance Checklist**

# Environmental Compliance Checklist

All applicants must fill out this Environmental Compliance Checklist. Applications must contain answers to the following questions to be responsive and to be considered for funding. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Do any of the actions included in the proposal require compliance with either the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), or both?

X  
YES

            
NO

2. If you answered yes to # 1, identify the lead governmental agency for CEQA/NEPA compliance.

California Department of Fish and Game (State) and dependant of funding source (Federal)  
Lead Agency

3. If you answered no to # 1, explain why CEQA/NEPA compliance is not required for the actions in the proposal.

4. If CEQA/NEPA compliance is required, describe how the project will comply with either or both of these laws. Describe where the project is in the compliance process and the expected date of completion.

Task 2 and Task 3 (in Project Approach and Objectives section) address preparation and submittal of environmental documentation and permitting associated with CEQA/NEPA compliance. The Project Team has not initiated the compliance process to date. The anticipated completion date is Spring 2002.

5. Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal?

            
YES

X  
NO

If yes, the applicant must attach written permission for access from the relevant property owner(s). Failure to include written permission for access may result in disqualification of the proposal during the review process. Research and monitoring field projects for which specific field locations have not been identified will be required to provide access needs and permission for access with 30 days of notification of approval.

6. Please indicate what permits or other approvals may be required for the activities contained in your proposal. Check all boxes that apply.

**LOCAL**

Conditional use permit	_____
Variance	_____
Subdivision Map Act approval	_____
Grading permit	_____
General plan amendment	_____
Specific plan approval	_____
Rezone	_____
Williamson Act Contract	_____
cancellation	_____
Other _____	
(please specify)	
None required	_____

**STATE**

CESA Compliance	<u>X</u>	(CDFG)
Streambed alteration permit	<u>X</u>	(CDFG)
CWA § 401 certification	<u>X</u>	(RWQCB)
Coastal development permit	_____	(Coastal Commission/BCDC)
Reclamation Board approval	<u>X</u>	
Notification	_____	(DPC, BCDC)
Other _____		
(please specify)		
None required	_____	

**FEDERAL**

ESA Consultation	<u>X</u>	(USFWS)
Rivers & Harbors Act permit	_____	(ACOE)
CWA § 404 permit	<u>X</u>	(ACOE)
Other _____		
(please specify)		
None required	_____	

DPC = Delta Protection Commission  
 CWA = Clean Water Act  
 CESA = California Endangered Species Act  
 USFWS = U.S. Fish and Wildlife Service  
 ACOE = U.S. Army Corps of Engineers

ESA = Endangered Species Act  
 CDFG = California Department of Fish and Game  
 RWQCB = Regional Water Quality Control Board  
 BCDC = Bay Conservation and Development Comm.

**Appendix C**  
**Land Use Checklist**



## Land Use Checklist

All applicants must fill out this Land Use Checklist for their proposal. Applications must contain answers to the following questions to be responsive and to be considered for funding. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Do the actions in the proposal involve physical changes to the land (i.e. grading, planting vegetation, or breaching levees) or restrictions in land use (i.e. conservation easement or placement of land in a wildlife refuge)?

X  
YES

\_\_\_\_\_  
NO

2. If NO to # 1, explain what type of actions are involved in the proposal (i.e., research only, planning only).

N/A

3. If YES to # 1, what is the proposed land use change or restriction under the proposal?

Task 5 of the proposed project will involve physical changes to restore floodplain and channel habitats on 60 acres along the Merced River (i.e., excavation of dredge tailings, grading, in-stream channel ammendments, and planting).

4. If YES to # 1, is the land currently under a Williamson Act contract?

\_\_\_\_\_  
YES

\_\_\_\_\_  
NO

5. If YES to # 1, answer the following:

Current land use

Current zoning

Current general plan designation

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. If YES to #1, is the land classified as Prime Farmland, Farmland of Statewide Importance or Unique Farmland on the Department of Conservation Important Farmland Maps?

\_\_\_\_\_  
YES

X  
NO

\_\_\_\_\_  
DON'T KNOW

7. If YES to # 1, how many acres of land will be subject to physical change or land use restrictions under the proposal?  
60 acres

8. If YES to # 1, is the property currently being commercially farmed or grazed?

\_\_\_\_\_  
YES

X  
NO

9. If YES to #8, what are

the number of employees/acre \_\_\_\_\_

the total number of employees \_\_\_\_\_

10. Will the applicant acquire any interest in land under the proposal (fee title or a conservation easement)?

**YES**

X  
NO

11. What entity/organization will hold the interest? \_\_\_\_\_

**12. If YES to # 10, answer the following:**

**Total number of acres to be acquired under proposal**

Number of acres to be acquired in fee

Number of acres to be subject to conservation easement

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**13. For all proposals involving physical changes to the land or restriction in land use, describe what entity or organization will:**

**manage the property**

California Department of Fish and Game

**provide operations and maintenance services**

California Department of Fish and Game

**conduct monitoring**

California Department of Fish and Game

**14. For land acquisitions (fee title or easements), will existing water rights also be acquired?**

**YES**

X  
NO

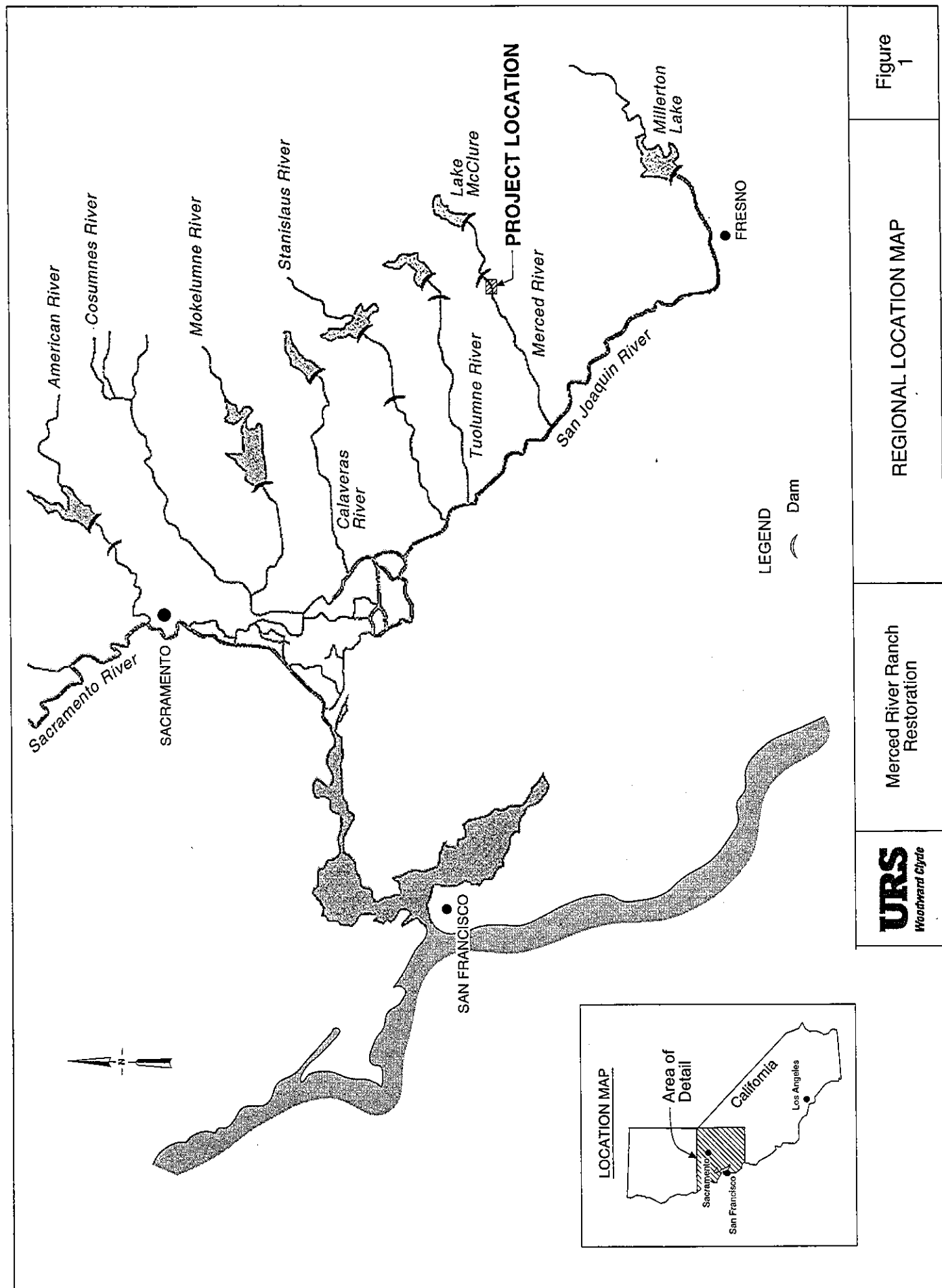
15. Does the applicant propose any modifications to the water right or change in the delivery of the water?

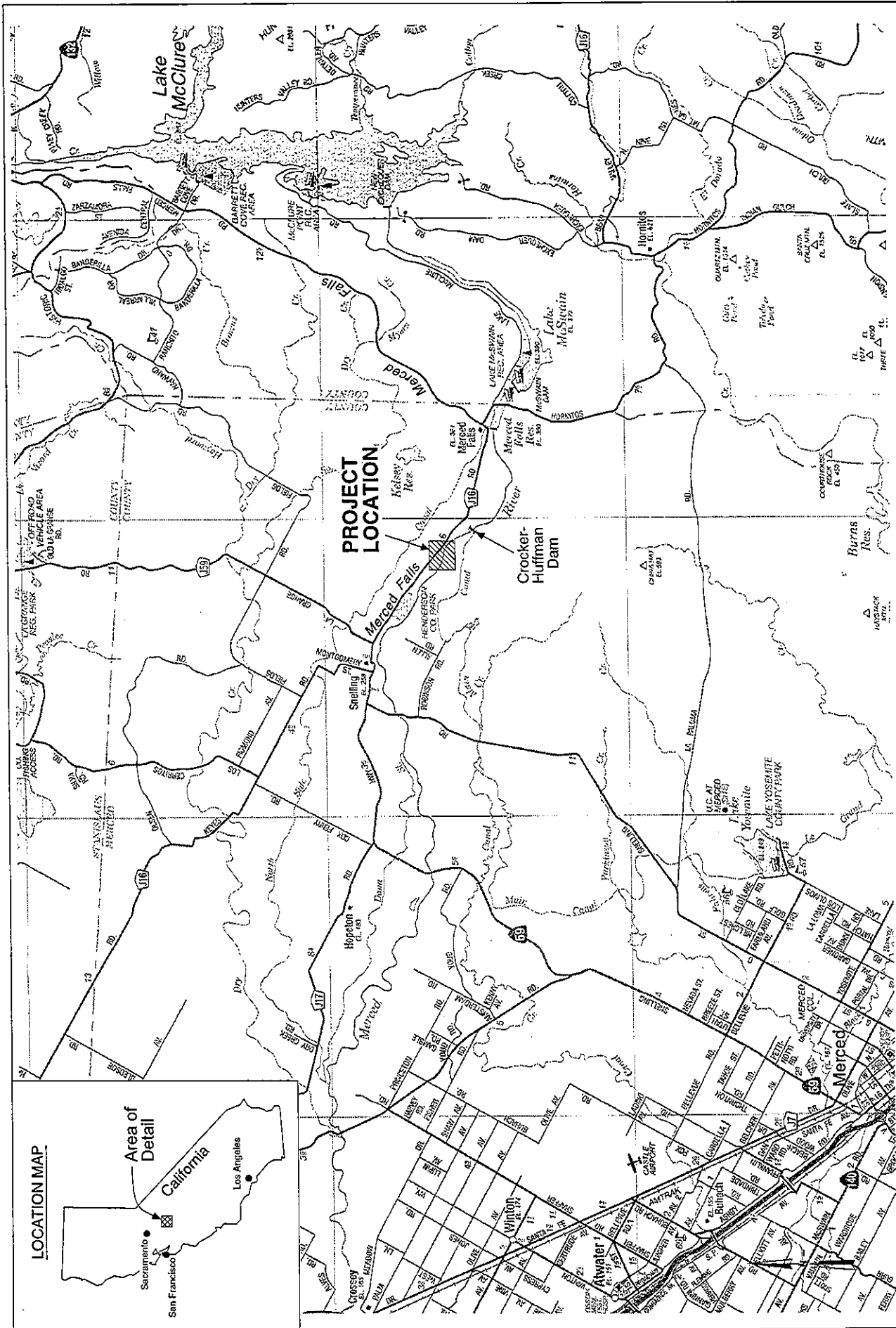
**YES**

Y  
NO

16. If YES to # 15, describe \_\_\_\_\_

**Appendix D**  
**Figures**





0 1 2 3 4 5 miles  
0 1 2 3 4 5 6 7 8 km

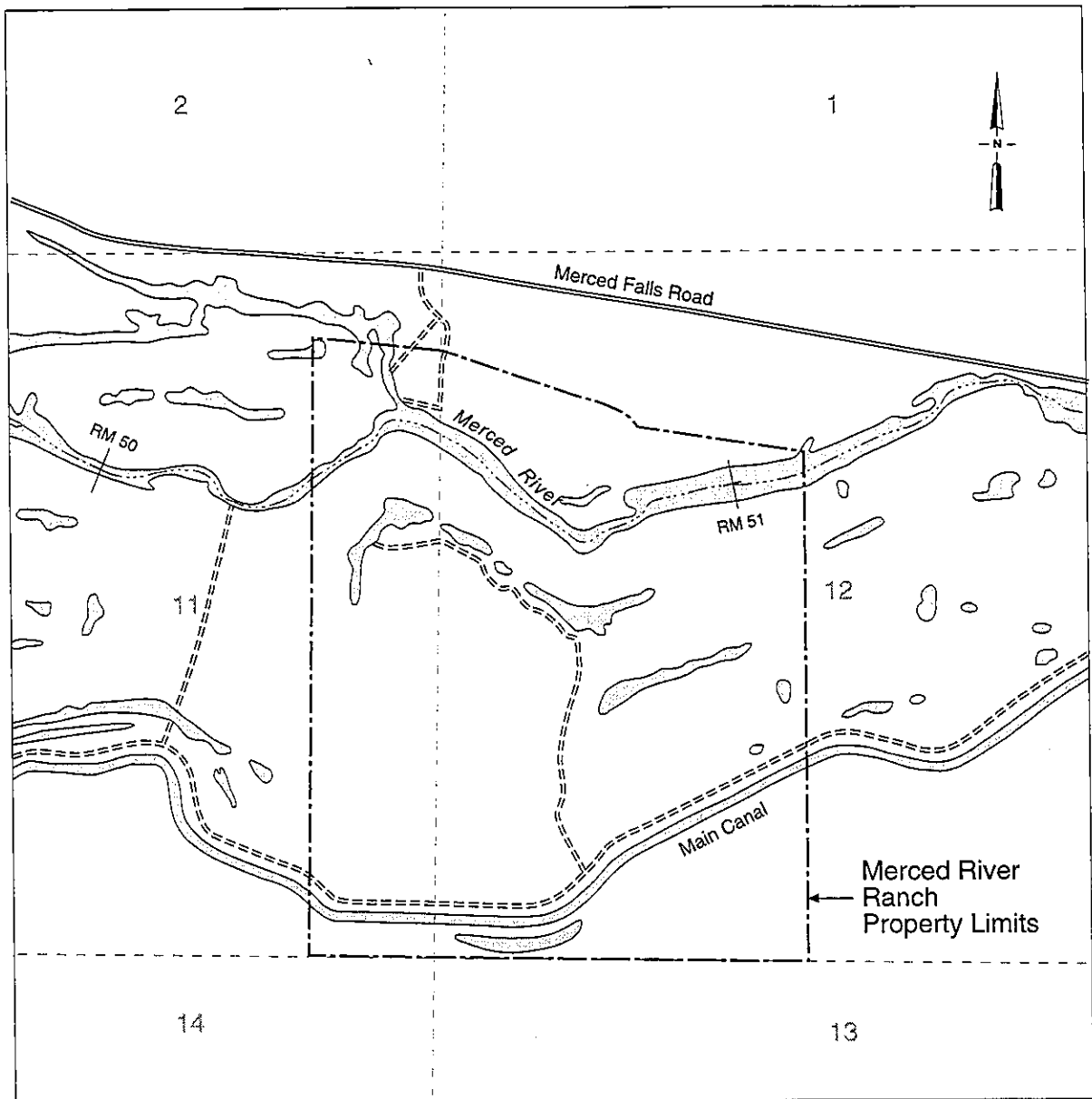
Source: AAA, Gold Country Region, 1999




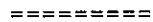
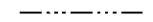
Merced River Ranch  
Restoration

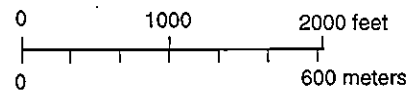
PROJECT LOCATION MAP

Figure  
2



#### LEGEND

-  Open water
-  Unimproved dirt road
-  River



Map Source: USGS Quad map,  
Snelling, California, 1962

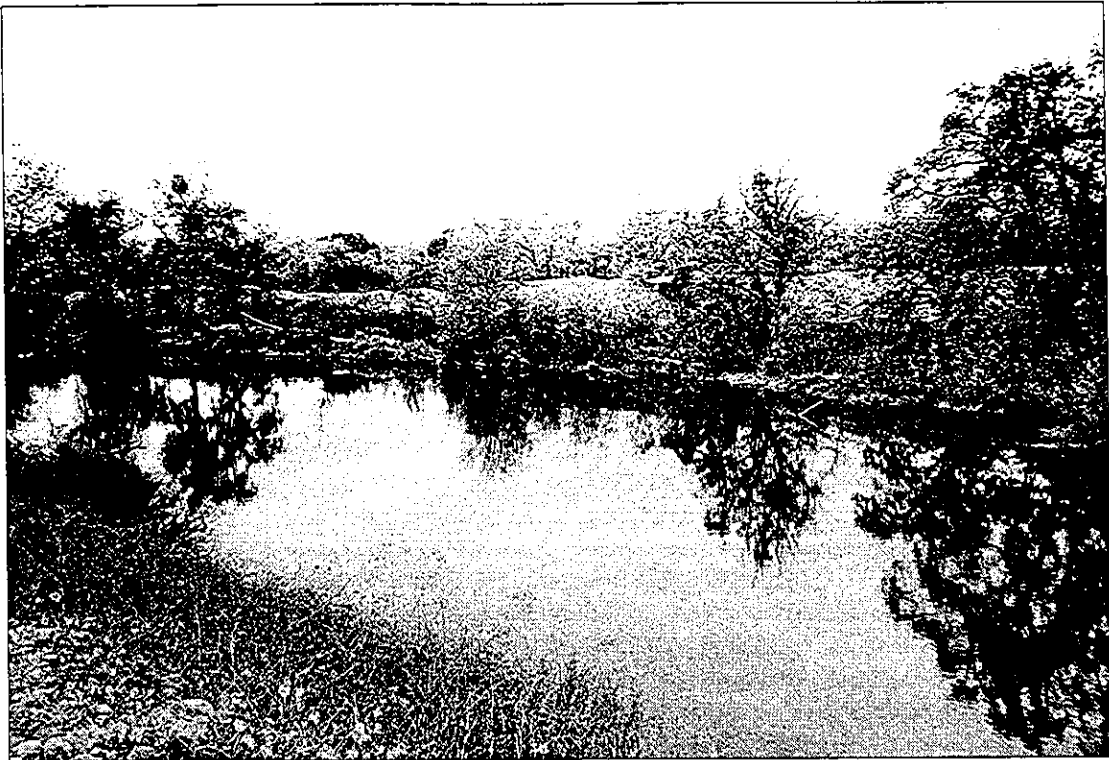


Photo 1. View of the Merced River, in the project area, bordered by dredge tailings

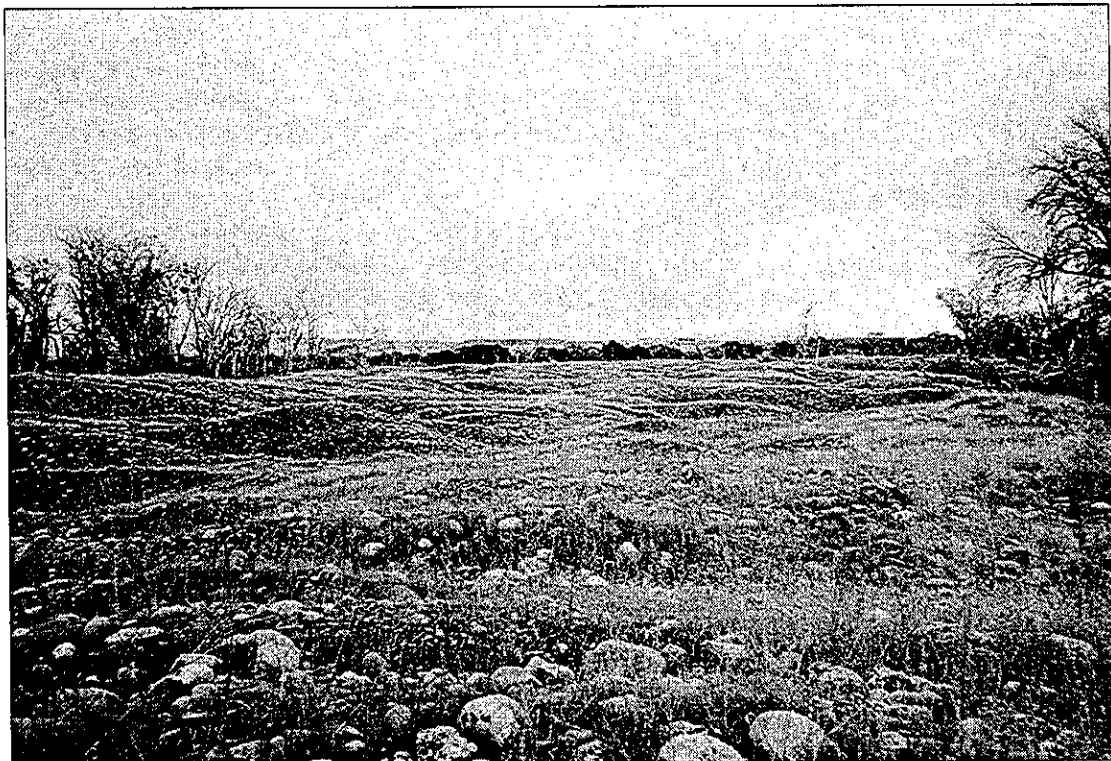
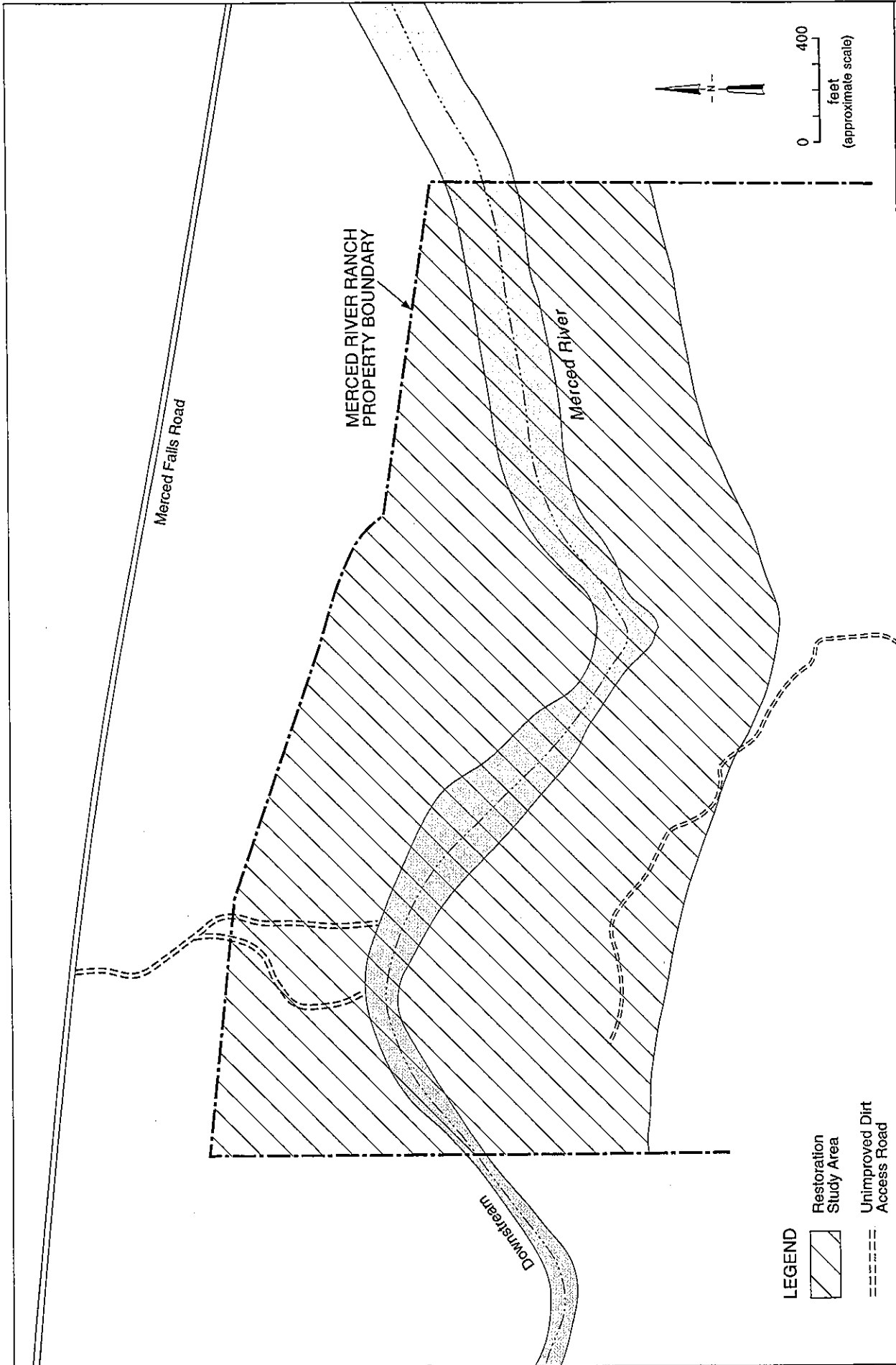
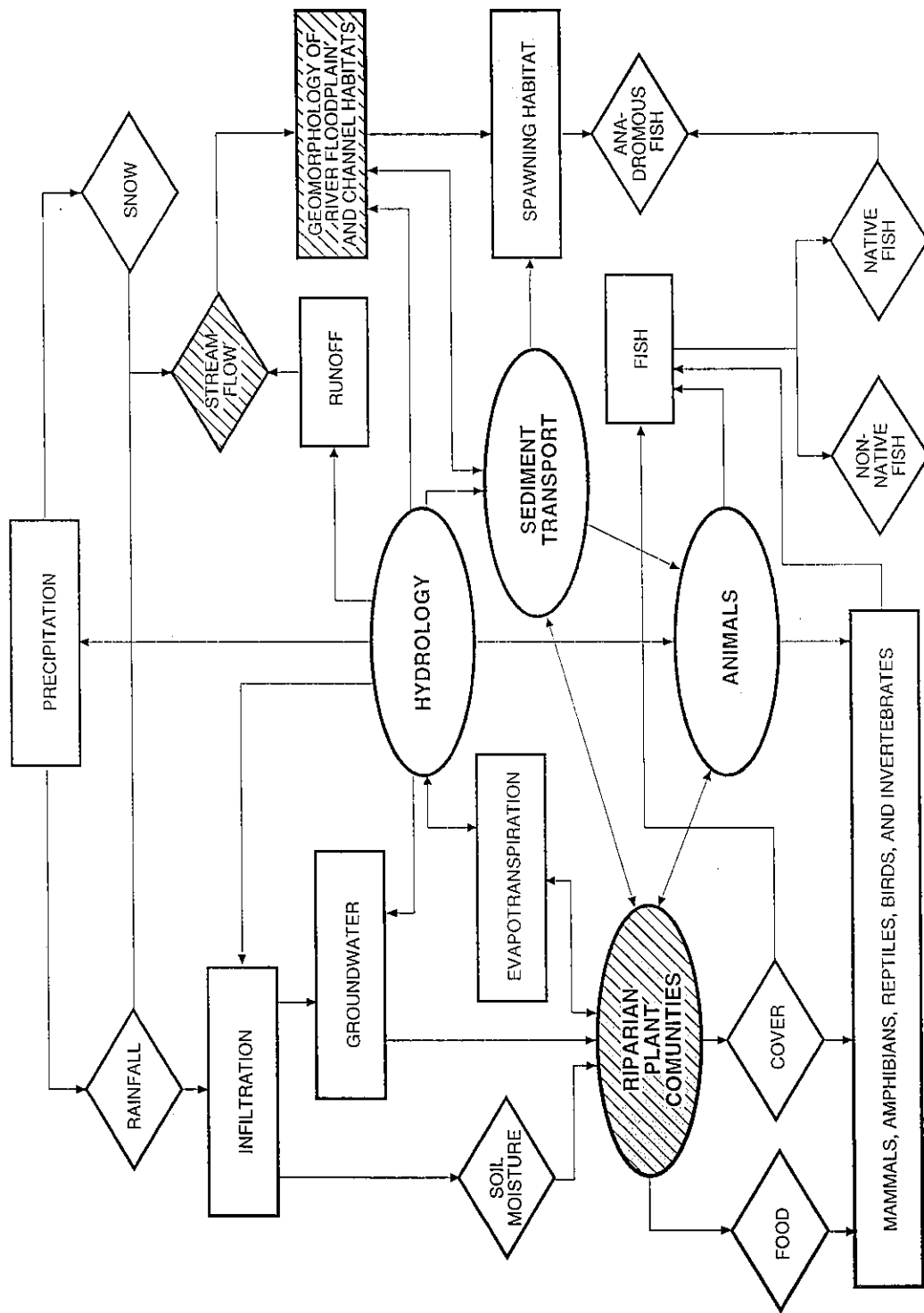


Photo 2. View of dredge tailings at the Merced River Ranch, south of the Merced River



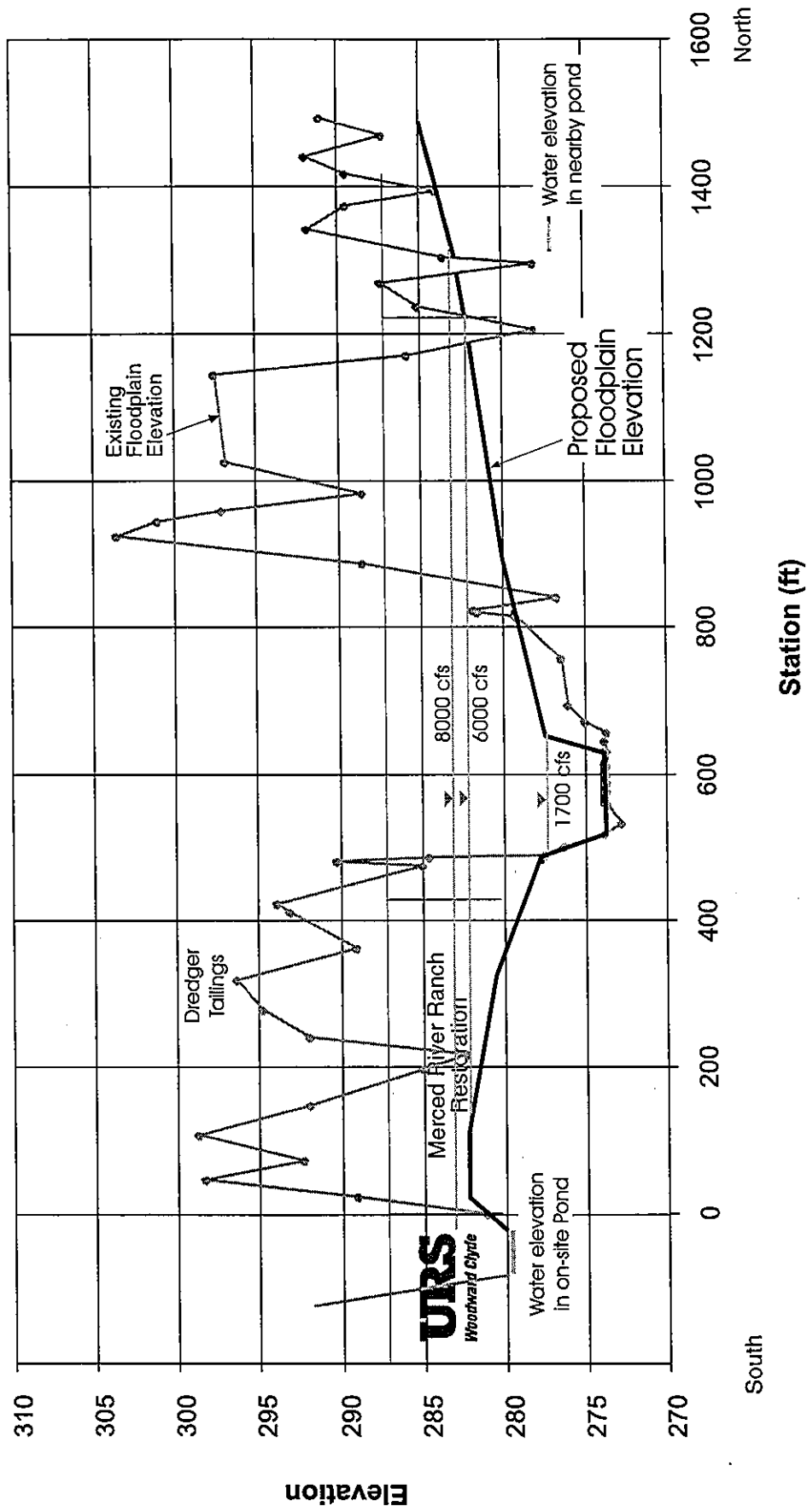




CONCEPTUAL MODEL OF  
MERCED RIVER CORRIDOR ECOSYSTEM  
HISTORIC ALTERATIONS AND  
PROPOSED RESTORATION

Merced River Ranch  
Restoration

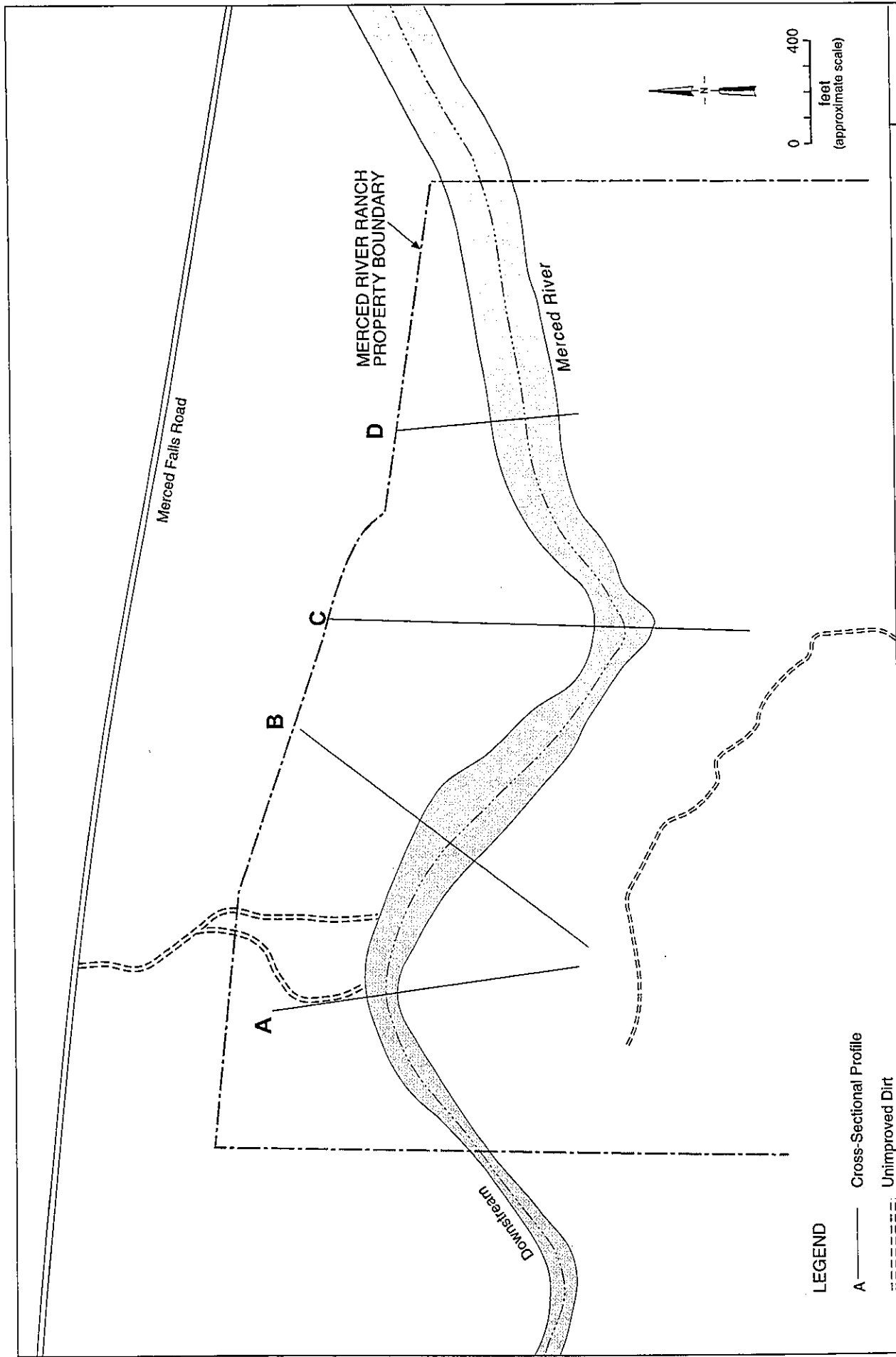
**URS**  
Woodward Clyde



EXAMPLE CROSS SECTION  
SHOWING EXISTING AND  
PROPOSED ELEVATIONS

Merced River Ranch  
Restoration





	<p>Merced River Ranch Restoration</p>	<p>GEOMORPHOLOGIC AND VEGETATION BASELINE SURVEY (April 2000)</p>	<p>Figure 8</p>
--	---------------------------------------	---	---------------------

**Appendix E**  
**Tables**



**Table 2. Previous CALFED and CVPIA Projects Funded**

The following is a list of projects that have been undertaken by various agencies that relate to the current proposal, and the status of each (a).

<b>Project Number</b>	<b>Project Title</b>	<b>Current Status</b>
<b>CALFED ADMINISTERED CONTRACTS</b>		
1997- C04A	Selected Fish Screens.	Work is underway on Sacramento River. One fish screen is 40% complete. Other work is underway.
1997- C09 (97-H121)	Developing a Genetic Baseline for San Joaquin Salmon.	Contract fully executed 2/1/99. Genetic analysis is underway
1997- C11 (97-H125)	Gravel at Basso Ridge.	Construction is complete. Monitoring began September 1999.
<b>1998- C04 (97-H122)</b>	<b>Merced River Ranch Acquisition and Restoration.</b>	<b>This is Phase I of the current project.</b>
1998- C05 (97-H123)	Basso Bridge Land Acquisition.	Working with Wildlife Conservation Board to contact owners and get properties appraised.
1998- C06	Water Quality Criteria for Chlorpyrifos and Diazinon.	Toxicity testing and analysis complete. Final report due 3/00.
1998- C09b	Sediment Water Quality.	Task order signed and Technical Advisory Panel selected.
1998- C11	Chinook Salmon Movement in the Lower San Joaquin River and South Delta.	Project delayed.
1998- C16	Developing a Method to Accurately Simulate Entrainment of Fish.	Contract executed 12/99.
<b>1999 B153</b>	<b>Merced River Corridor Restoration Project Phase II.</b>	<b>Construction is complete. Revegetation and monitoring underway.</b>
<b>USBR ADMINISTERED CONTRACTS</b>		
1998- B30 (98-H1001)	San Joaquin Valley Salmonids in the Classroom Program Enhancement.	Completed.
<b>USFWS ADMINISTERED CONTRACTS</b>		
1998- F08	Hill Slough West Habitat Demonstration Project, Phase 1.	The CDFG is currently developing an RFP for consultant services.
1998- F09	Rhode Island Floodplain Management and Habitat Restoration, Phase I:	Executed 4/99.
1998- F10	Nelson Slough Wildlife Area	Proposal withdrawn 6/99.

	Restoration Demonstration Project, Phases I and II.	
1998- F11 (98-C1009)	Phase III - Merced River Salmon Habitat Enhancement.	Final designs in preparation.
2000- F02	Canal Ranch Habitat Restoration Phase II.	Approved by Secretary, funds not obligated.
2000-F04	A Mechanistic Approach to Riparian Restoration – San Joaquin Basin, Phase I & II.	Approved by Secretary
<b>2000-F05</b>	<b>Merced River Corridor Restoration Project Phase III.</b>	<b>Approved by Secretary</b>
<b>CVPIA ADMINISTERED CONTRACTS</b>		
00-L D-10	Feasibility of Long Term Aggregate Source for San Joaquin Tributary Channel Restoration Projects.	Unknown status
<b>99-L A-7</b>	<b>Ratzlaff Reach: Merced River Corridor Restoration Project Phase II (joint w/DWR).</b>	<b>Construction is complete. Revegetation and monitoring underway.</b>
<b>99-L A-8</b>	<b>Lower Wester Stone Preliminary Design: Merced River Corridor Restoration Phase IV.</b>	<b>Contract execution in progress.</b>
99-L D-10	Riffle Atlas Update for San Joaquin Tributaries.	Agreement completed 4/00.
<b>USEPA ADMINISTERED CONTRACTS</b>		
<b>1998-E09</b>	<b>Merced River Restoration Plan.</b>	<b>GIS database coverages complete. Vegetation and geomorphic field data collected at two sites. Stakeholder review complete.</b>

a) **BOLD** type in table indicates projects directly associated with the current Merced River restoration proposal, either through applicable scientific information or stream corridor continuums.

**Appendix F**  
**Request for Next-Phase Funding**



## **Request for next Phase Funding**

### **97-H122      Merced River Ranch Acquisition and Restoration**

Phase I of this project was funded in the 1997 CALFED proposal cycle. This was a partnership project between the California Department of Fish and Game (CDFG) and the Wildlife Conservation Board (WCB). Contracts to appraise the property value were led by WCB in November 1999. Appraisals were received and negotiations with the landowners were initiated in January 2000. A price of \$324,000 was agreed upon by the eight co-owners. Five of the necessary eight landowner's signatures have been obtained, and WCB is in the process of obtaining the last signature. Some of the co-owners live out of state, but signatures are being obtained. When the last signature is obtained, the acquisition will be submitted to the Public Works Board for final approval. This is likely to occur at the June meeting of this body. Upon approval, the purchase funds will be requested to be put in escrow immediately. To date WCB has billed approximately \$10,000 for their services in this transaction. On acquisition, CDFG will assume possession and control of the property.

#### **Access**

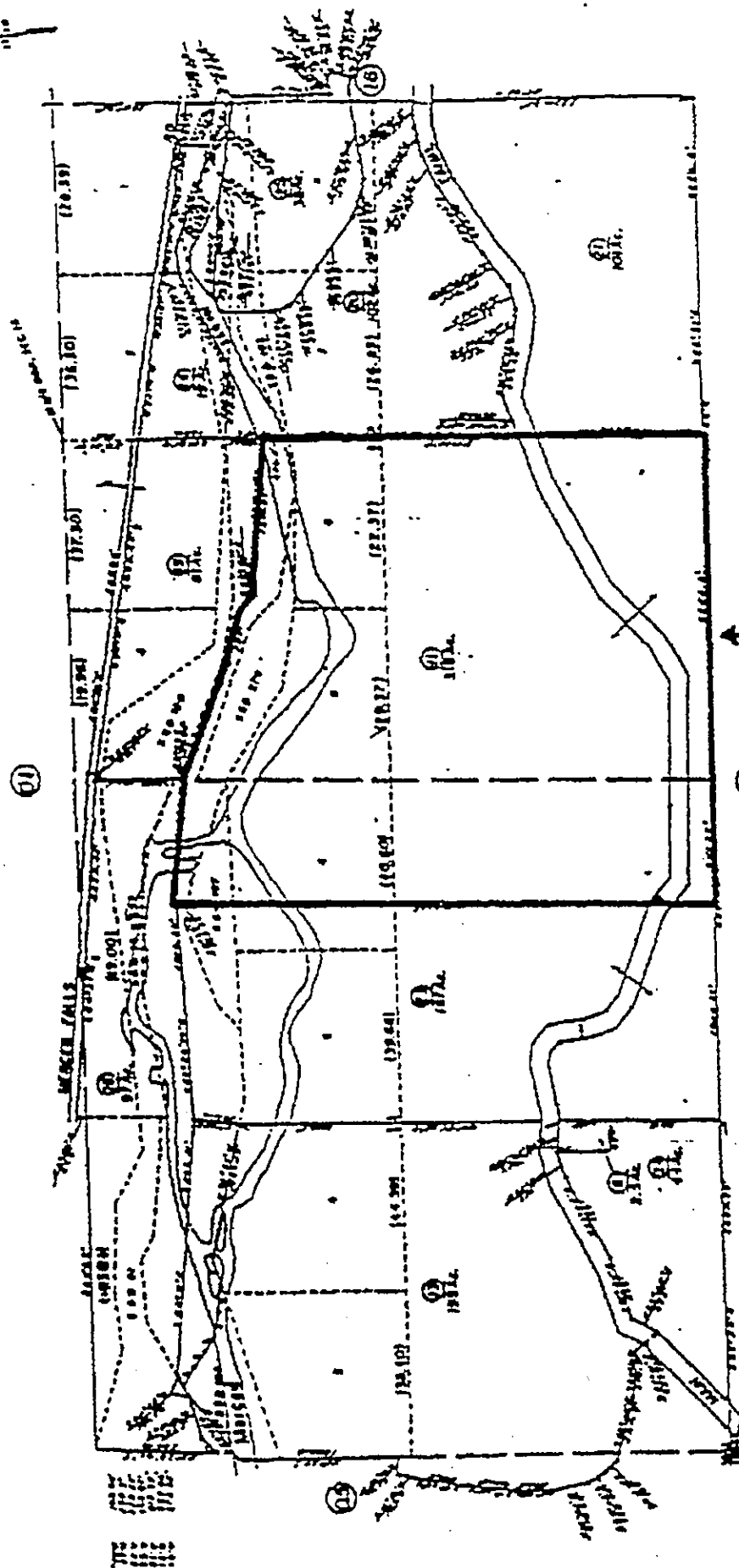
CDFG has obtained an administrative easement on the Merced Irrigation District main canal road. Since this is not a public easement, CDFG has assumed maintenance responsibilities for this road.

Figure 2. Subject Property

T.5S., R.14E., M.D.B. & M.

For Reference 101-01  
101-06

43-06



Assessor's Map Bl. 43-7p. 06  
County of Merced, Calif.  
1969

Subject Property

NOTE - Assessor's Map Bl. 43-7p. 06  
Assessor's Map Bl. 43-7p. 06  
Assessor's Map Bl. 43-7p. 06

**Appendix G**  
**Budget**

Table 3. Annual Budget (2001-2003).

Year	Task	Direct Labor Hours	Subject to Overhead				Overhead (141.87%)	Total Cost		
			Salary	Benefits (salary x 50.042%)	Travel	Supplies & Expendables			Service Contracts	
2001	Task 1. Preliminary Restoration Design									
	Subtask 1a. Preliminary Restoration Planning (cost sharing with CDFG- not requested in this proposal)									
	Subtask 1b. Develop Conceptual Model	214	\$ 6,275	\$ 3,140			\$ 8,753	\$ 8,902	\$ 27,070	
	Subtask 1c. Develop Preliminary Rest. Designs	250	\$ 7,227	\$ 3,617		\$ 2,400	\$ 12,000	\$ 10,253	\$ 35,496	
	Subtask 1d. Develop Monitoring Program	54	\$ 1,504	\$ 752			\$ 2,000	\$ 2,133	\$ 6,389	
	Subtask 1e. Report Preparation	80	\$ 2,352	\$ 1,177				\$ 3,337	\$ 6,866	
	Subtask 1f. Technical and Peer Review	32	\$ 1,286	\$ 644			\$ 13,505	\$ 1,825	\$ 17,260	
	Subtask 1g. TAC/Stakeholder Review	60	\$ 1,940	\$ 971	\$ 250		\$ 4,753	\$ 2,753	\$ 10,667	
	Subtask 1h. Project Management	69	\$ 3,450	\$ 1,726				\$ 4,895	\$ 10,071	
	Task 2. Environmental Documentation									
	Subtask 2a. Topographic Survey of Property	60	\$ 1,665	\$ 833	\$ -	\$ 200	\$ 25,000	\$ 2,362	\$ 30,060	
	Subtask 2b. Jurisdictional Wetland Delineation	180	\$ 4,615	\$ 2,309	\$ 1,100	\$ 400		\$ 6,547	\$ 14,970	
	Subtask 2c. Special Status Species Surveys	224	\$ 5,083	\$ 2,543	\$ 2,200	\$ 300	\$ 1,376	\$ 7,211	\$ 18,713	
	Subtask 2d. Cultural Resource Surveys & Doc.	376	\$ 11,094	\$ 5,552	\$ 1,400	\$ 750		\$ 15,739	\$ 34,535	
	Subtask 2e. Develop Project Description	104	\$ 3,396	\$ 1,699	\$ -	\$ 400	\$ 2,753	\$ 4,818	\$ 13,066	
	Subtask 2f. Administrative Draft IS/EA	528	\$ 12,271	\$ 6,141	\$ 250	\$ 1,500	\$ 2,753	\$ 17,409	\$ 40,323	
	Subtask 2g. Final IS/EA	376	\$ 8,299	\$ 4,153	\$ 150	\$ 2,350	\$ 1,376	\$ 11,773	\$ 28,101	
	Subtask 2h. Public Workshop and Presentation to TAC	80	\$ 2,550	\$ 1,276	\$ 600	\$ 200	\$ 5,505	\$ 3,618	\$ 13,750	
	Subtask 2i. Agency Coordination and Meetings	180	\$ 5,940	\$ 2,972	\$ 800	\$ -	\$ 2,753	\$ 8,427	\$ 20,891	
	Subtask 2j. Project Management	148	\$ 7,323	\$ 3,665	\$ 250	\$ -		\$ 10,389	\$ 21,627	
	Task 3. Permitting									
	Subtask 3a. ACOE Permit and Delineation Confirmation	120	\$ 3,208	\$ 1,605	\$ 140	\$ 140		\$ 4,551	\$ 9,644	
	Subtask 3b. RWQCB Certification	24	\$ 715	\$ 358	\$ -	\$ 325		\$ 1,015	\$ 2,413	
	Subtask 3c. CDFG 1600 Agreement	40	\$ 1,138	\$ 569	\$ 80	\$ 550		\$ 1,614	\$ 3,951	
	Subtask 3d. Biological Assessment	84	\$ 2,708	\$ 1,355	\$ -	\$ 200		\$ 3,842	\$ 8,105	
	Subtask 3e. Reclamation Board Permit	44	\$ 1,702	\$ 852	\$ -	\$ 100		\$ 2,415	\$ 5,068	
	Subtask 3f. Project Management	24	\$ 1,930	\$ 966	\$ -	\$ -		\$ 2,738	\$ 5,633	
	Total Cost for 2001		3,351	\$ 97,670	\$ 48,876	\$ 7,220	\$ 9,815	\$ 82,527	\$ 138,564	\$ 384,672
2002	Task 3. Permitting									
	Subtask 3a. ACOE Permit and Delineation Confirmation	52	\$ 1,440	\$ 721	\$ 60	\$ 60		\$ 2,043	\$ 4,324	
	Subtask 3b. RWQCB Certification	14	\$ 321	\$ 161	\$ -	\$ 195		\$ 456	\$ 1,133	
	Subtask 3c. CDFG 1600 Agreement	24	\$ 511	\$ 256	\$ 48	\$ 330	\$ 2,753	\$ 725	\$ 4,622	
	Subtask 3d. Biological Assessment	50	\$ 1,216	\$ 608	\$ -	\$ 120	\$ 2,753	\$ 1,725	\$ 6,422	
	Subtask 3e. Reclamation Board Permit	26	\$ 764	\$ 382	\$ -	\$ 60		\$ 1,084	\$ 2,291	
	Subtask 3f. Project Management	14	\$ 866	\$ 434	\$ -	\$ -		\$ 1,229	\$ 2,529	
	Task 4. Final Restoration Design									
	Subtask 4a. 80% Design Drawings	400	\$ 12,683	\$ 6,347		\$ 1,920	\$ 6,000	\$ 17,993	\$ 44,943	
	Subtask 4b. Planting Design	66	\$ 1,806	\$ 904		\$ 480		\$ 2,562	\$ 5,752	
	Subtask 4c. Monitoring Program Design	48	\$ 1,320	\$ 660			\$ 5,505	\$ 1,872	\$ 9,358	

Table 3. Annual Budget (2001-2003).

Year	Task	Direct Labor Hours	Subject to Overhead					Service Contracts	Overhead (141.87%)	Total Cost
			Salary	Benefits (salary x 50.042%)	Travel	Supplies & Expend-ables				
	Subtask 4d. Technical and Peer Review	32	\$ 1,286	\$ 644				\$ 4,000	\$ 1,825	\$ 7,755
	Subtask 4e. TAC/Stakeholder Review Process	60	\$ 1,940	\$ 971	\$ 250			\$ 5,505	\$ 2,753	\$ 11,420
	Subtask 4f. Final Designs	170	\$ 5,225	\$ 2,615				\$ 2,753	\$ 7,413	\$ 18,005
	Subtask 4g. TAC/Stakeholder Review Process	60	\$ 1,940	\$ 971	\$ 250			\$ 2,753	\$ 2,753	\$ 8,667
	Subtask 4h. Report Preparation	64	\$ 1,654	\$ 828				\$ 5,505	\$ 2,346	\$ 10,333
	Subtask 4i. Project Management	90	\$ 4,500	\$ 2,252					\$ 6,384	\$ 13,136
	Task 5. Pilot Project Implementation									
	Subtask 5a. Mobilization/Demobilization	10	\$ 180	\$ 90	\$ 110	\$ 25		\$ 10,000	\$ 255	\$ 10,660
	Subtask 5b. Site Layout	6	\$ 108	\$ 54	\$ 66	\$ 15		\$ 6,000	\$ 153	\$ 6,396
	Subtask 5c. Clearing	30	\$ 540	\$ 270	\$ 330	\$ 75		\$ 30,000	\$ 766	\$ 31,981
	Subtask 5d. Access Road Improvements	30	\$ 540	\$ 270	\$ 330	\$ 75		\$ 30,000	\$ 766	\$ 31,981
	Subtask 5e. Earth Work	1,535	\$ 27,630	\$ 13,827	\$ 16,885	\$ 3,838		\$ 1,535,000	\$ 39,199	\$ 1,636,378
	Subtask 5h. In-Stream Material Placement	350	\$ 6,300	\$ 3,153	\$ 3,850	\$ 875		\$ 350,000	\$ 8,938	\$ 373,115
	Subtask 5i. Inspection Surveys	62	\$ 1,123	\$ 562	\$ 686	\$ 156		\$ 62,400	\$ 1,593	\$ 66,521
	Subtask 5j. Re-vegetation/Planting (for 60 ac.)	25	\$ 450	\$ 225	\$ 275	\$ 63		\$ 25,000	\$ 638	\$ 26,651
	Subtask 5k. Install Irrigation System (for 60 ac.)	25	\$ 450	\$ 225	\$ 275	\$ 63		\$ 25,000	\$ 638	\$ 26,651
	Subtask 5l. Install Monitoring Equipment	15	\$ 267	\$ 134	\$ 163	\$ 37		\$ 14,822	\$ 379	\$ 15,801
	Subtask 5m. Contingencies (estimated @ 15%)							\$ 305,000		\$ 305,000
	(Note: construction management estimated @ 7%)									
	Total Cost for 2002	3259	\$ 75,061	\$ 37,562	\$ 23,578	\$ 8,386		\$ 2,430,749	\$ 106,490	\$ 2,681,826
2003	Task 6. Long Term Monitoring (Year 1 only)									
	Subtask 6a. Geomorphology	96	\$ 2,522	\$ 1,262	\$ 1,500	\$ 300			\$ 3,578	\$ 9,163
	Subtask 6b. Vegetation	88	\$ 2,275	\$ 1,138	\$ 1,500	\$ 300			\$ 3,227	\$ 8,440
	Subtask 6c. Tracer Gravel	80	\$ 2,102	\$ 1,052	\$ 1,500	\$ 300			\$ 2,982	\$ 7,936
	Subtask 6d. Redd Survey	32	\$ 1,232	\$ 617	\$ 60			\$ 13,764	\$ 1,748	\$ 17,420
	Subtask 6e. Groundwater Levels	8	\$ 255	\$ 128	\$ 80				\$ 362	\$ 825
	Subtask 6f. Water Chemistry	4	\$ 79	\$ 40		\$ 350			\$ 112	\$ 581
	Subtask 6f. Sedimentation/Erosion	16	\$ 317	\$ 159	\$ 80				\$ 449	\$ 1,005
	Subtask 6g. Report Preparation	148	\$ 3,687	\$ 1,845				\$ 2,753	\$ 5,231	\$ 13,516
	Subtask 6h. Workshop to TAC/Stakeholders	88	\$ 3,021	\$ 1,512	\$ 300			\$ 5,505	\$ 4,285	\$ 14,623
	Subtask 6i. Project Management	56	\$ 3,080	\$ 1,541					\$ 4,370	\$ 8,991
	Total Cost for 2003	616	\$ 18,570	\$ 9,293	\$ 5,020	\$ 1,250		\$ 22,022	\$ 26,346	\$ 82,500
	Total Project Cost	7,227	\$ 191,301	\$ 95,731	\$ 35,818	\$ 19,451		\$ 2,535,298	\$ 271,399	\$ 3,148,998

Note: <sup>1</sup> Overhead includes a fee on total value of raw labor + benefits + overhead

Table 4. Task Summary Budget (2001-2003).

Task	Subtask	Direct Labor Hours	Subject to Overhead			Supplies & Expendables	Service Contracts	Overhead (141.87%)	Total Cost
			Salary	Benefits (salary x 50.042%)	Travel				
Task 1	Preliminary Restoration Design								
	Subtask 1a. Preliminary Restoration Planning (cost sharing with CDFG- not requested in this proposal)	214	\$ 6,275	\$ 3,140	\$ -	\$ -	\$ 8,753	\$ 8,902	\$ 27,070
	Subtask 1b. Develop Conceptual Model	250	\$ 7,227	\$ 3,617	\$ -	\$ 2,400	\$ 12,000	\$ 10,253	\$ 35,496
	Subtask 1c. Develop Preliminary Rest. Designs	54	\$ 1,504	\$ 752	\$ -	\$ -	\$ 2,000	\$ 2,133	\$ 6,389
	Subtask 1d. Develop Monitoring Program	80	\$ 2,352	\$ 1,177	\$ -	\$ -	\$ -	\$ 3,337	\$ 6,866
	Subtask 1e. Report Preparation	32	\$ 1,286	\$ 644	\$ -	\$ -	\$ 13,505	\$ 1,825	\$ 17,260
	Subtask 1f. Technical and Peer Review	60	\$ 1,940	\$ 971	\$ 250	\$ -	\$ 4,753	\$ 2,753	\$ 10,667
	Subtask 1g. TAC/Stakeholder Review	69	\$ 3,450	\$ 1,726	\$ -	\$ -	\$ -	\$ 4,895	\$ 10,071
	Subtask 1h. Project Management	759	\$ 24,034	\$ 12,027	\$ 250	\$ 2,400	\$ 41,011	\$ 34,097	\$ 113,819
	Task 1 Summary								
Task 2	Environmental Documentation								
	Subtask 2a. Topographic Survey of Property	60	\$ 1,665	\$ 833	\$ -	\$ 200	\$ 25,000	\$ 2,362	\$ 30,060
	Subtask 2b. Jurisdictional Wetland Delineation	180	\$ 4,615	\$ 2,309	\$ 1,100	\$ 400	\$ -	\$ 6,547	\$ 14,970
	Subtask 2c. Special Status Species Surveys	224	\$ 5,083	\$ 2,543	\$ 2,200	\$ 300	\$ 1,376	\$ 7,211	\$ 18,713
	Subtask 2d. Cultural Resource Surveys & Doc.	376	\$ 11,094	\$ 5,552	\$ 1,400	\$ 750	\$ -	\$ 15,739	\$ 34,535
	Subtask 2e. Develop Project Description	104	\$ 3,396	\$ 1,699	\$ -	\$ 400	\$ 2,753	\$ 4,818	\$ 13,066
	Subtask 2f. Administrative Draft IS/EA	528	\$ 12,271	\$ 6,141	\$ 250	\$ 1,500	\$ 2,753	\$ 17,409	\$ 40,323
	Subtask 2g. Final IS/EA	376	\$ 8,299	\$ 4,153	\$ 150	\$ 2,350	\$ 1,376	\$ 11,773	\$ 28,101
	Subtask 2h. Public Workshop and Presentation to TAC	80	\$ 2,550	\$ 1,276	\$ 600	\$ 200	\$ 5,505	\$ 3,618	\$ 13,750
	Subtask 2i. Agency Coordination and Meetings	180	\$ 5,940	\$ 2,972	\$ 800	\$ -	\$ 2,753	\$ 8,427	\$ 20,891
Task 3	Permitting								
	Subtask 3a. ACOE Permit and Delineation Confirmation	172	\$ 4,648	\$ 2,326	\$ 200	\$ 200	\$ -	\$ 6,594	\$ 13,968
	Subtask 3b. RWQCB Certification	38	\$ 1,037	\$ 519	\$ -	\$ 520	\$ -	\$ 1,471	\$ 3,546
	Subtask 3c. CDFG 1600 Agreement	64	\$ 1,649	\$ 825	\$ 128	\$ 880	\$ 2,753	\$ 2,339	\$ 8,573
	Subtask 3d. Biological Assessment	134	\$ 3,924	\$ 1,964	\$ -	\$ 320	\$ 2,753	\$ 5,567	\$ 14,527
	Subtask 3e. Reclamation Board Permit	70	\$ 2,466	\$ 1,234	\$ -	\$ 160	\$ -	\$ 3,499	\$ 7,359
	Subtask 3f. Project Management	38	\$ 2,796	\$ 1,399	\$ -	\$ -	\$ -	\$ 3,967	\$ 8,163
	Task 3 Summary	518	\$ 16,520	\$ 8,267	\$ 328	\$ 2,080	\$ 5,505	\$ 23,436	\$ 56,136
Task 4	Final Restoration Design								
	Subtask 4a. 80% Design Drawings	400	\$ 12,683	\$ 6,347	\$ -	\$ 1,920	\$ 6,000	\$ 17,993	\$ 44,943
	Subtask 4b. Planting Design	66	\$ 1,806	\$ 904	\$ -	\$ 480	\$ -	\$ 2,562	\$ 5,752
	Subtask 4c. Monitoring Program Design	48	\$ 1,320	\$ 660	\$ -	\$ -	\$ 5,505	\$ 1,872	\$ 9,358
	Subtask 4d. Technical and Peer Review	32	\$ 1,286	\$ 644	\$ -	\$ -	\$ 4,000	\$ 1,825	\$ 7,755
	Subtask 4e. TAC/Stakeholder Review Process	60	\$ 1,940	\$ 971	\$ 250	\$ -	\$ 5,505	\$ 2,753	\$ 11,420
	Subtask 4f. Final Designs	170	\$ 5,225	\$ 2,615	\$ -	\$ -	\$ 2,753	\$ 7,413	\$ 18,005
	Subtask 4g. TAC/Stakeholder Review Process	60	\$ 1,940	\$ 971	\$ 250	\$ -	\$ 2,753	\$ 2,753	\$ 8,667
	Subtask 4h. Report Preparation	64	\$ 1,654	\$ 828	\$ -	\$ -	\$ 5,505	\$ 2,346	\$ 10,333
	Subtask 4i. Project Management	90	\$ 4,500	\$ 2,252	\$ -	\$ -	\$ -	\$ 6,384	\$ 13,136
Phase II	Task 4 Summary	990	\$ 32,355	\$ 16,191	\$ 500	\$ 2,400	\$ 32,022	\$ 45,902	\$ 129,369
	Task 4 Summary								
Phase II Cost Summary		4523	\$ 135,143	\$ 67,628	\$ 7,828	\$ 12,980	\$ 120,054	\$ 191,728	\$ 555,361

Table 4. Task Summary Budget (2001-2003).

Task	Subtask	Direct Labor Hours	Subject to Overhead					Overhead (141.87%) <sup>1</sup>	Total Cost
			Salary	Benefits (salary x 50.042%)	Travel	Supplies & Expendables	Service Contracts		
Task 5	Pilot Project Implementation								
	Subtask 5a. Mobilization/Demobilization	10	\$ 180	\$ 90	\$ 110	\$ 25	\$ 10,000	\$ 255	\$ 10,660
	Subtask 5b. Site Layout	6	\$ 108	\$ 54	\$ 66	\$ 15	\$ 6,000	\$ 153	\$ 6,396
	Subtask 5c. Clearing	30	\$ 540	\$ 270	\$ 330	\$ 75	\$ 30,000	\$ 766	\$ 31,981
	Subtask 5d. Access Road Improvements	30	\$ 540	\$ 270	\$ 330	\$ 75	\$ 30,000	\$ 766	\$ 31,981
	Subtask 5e. Earth Work	1,535	\$ 27,630	\$ 13,827	\$ 16,885	\$ 3,838	\$ 1,535,000	\$ 39,199	\$ 1,636,378
	Subtask 5h. In-Stream Material Placement	350	\$ 6,300	\$ 3,153	\$ 3,850	\$ 875	\$ 350,000	\$ 8,938	\$ 373,115
	Subtask 5i. Inspection Surveys	62	\$ 1,123	\$ 562	\$ 686	\$ 156	\$ 62,400	\$ 1,593	\$ 66,521
	Subtask 5j. Re-vegetation/Planting (for 60 ac.)	25	\$ 450	\$ 225	\$ 275	\$ 63	\$ 25,000	\$ 638	\$ 26,651
	Subtask 5k. Install Irrigation System (for 60 ac.)	25	\$ 450	\$ 225	\$ 275	\$ 63	\$ 25,000	\$ 638	\$ 26,651
	Subtask 5l. Install Monitoring Equipment	15	\$ 267	\$ 134	\$ 163	\$ 37	\$ 14,822	\$ 379	\$ 15,801
	Subtask 5m. Contingencies (estimated @ 15%)	0	\$ -	\$ -	\$ -	\$ -	\$ 305,000	\$ -	\$ 305,000
(Note: construction management estimated @7%)									
Task 5 Summary			\$ 37,588	\$ 18,810	\$ 22,970	\$ 5,221	\$ 2,393,222	\$ 53,326	\$ 2,531,137
Task 6	Long Term Monitoring (Year 1 only)								
	Subtask 6a. Geomorphology	96	\$ 2,522	\$ 1,262	\$ 1,500	\$ 300	\$ -	\$ 3,578	\$ 9,163
	Subtask 6b. Vegetation	88	\$ 2,275	\$ 1,138	\$ 1,500	\$ 300	\$ -	\$ 3,227	\$ 8,440
	Subtask 6c. Tracer Gravel	80	\$ 2,102	\$ 1,052	\$ 1,500	\$ 300	\$ -	\$ 2,982	\$ 7,936
	Subtask 6d. Redd Survey	32	\$ 1,232	\$ 617	\$ 60	\$ -	\$ 13,764	\$ 1,748	\$ 17,420
	Subtask 6e. Groundwater Levels	8	\$ 255	\$ 128	\$ 80	\$ -	\$ -	\$ 362	\$ 825
	Subtask 6f. Water Chemistry	4	\$ 79	\$ 40	\$ -	\$ 350	\$ -	\$ 112	\$ 581
	Subtask 6f. Sedimentation/Erosion	16	\$ 317	\$ 159	\$ 80	\$ -	\$ -	\$ 449	\$ 1,005
	Subtask 6g. Report Preparation	148	\$ 3,687	\$ 1,845	\$ -	\$ -	\$ 2,753	\$ 5,231	\$ 13,516
	Subtask 6h. Workshop to TAC/Stakeholders	88	\$ 3,021	\$ 1,512	\$ 300	\$ -	\$ 5,505	\$ 4,285	\$ 14,823
	Subtask 6i. Project Management	56	\$ 3,080	\$ 1,541	\$ -	\$ -	\$ -	\$ 4,370	\$ 8,991
Task 6 Summary			\$ 18,570	\$ 9,293	\$ 5,020	\$ 1,250	\$ 22,022	\$ 26,346	\$ 82,500
Phase III Cost Summary			\$ 56,158	\$ 28,103	\$ 27,990	\$ 6,471	\$ 2,415,244	\$ 79,672	\$ 2,613,537
Total Project Cost			\$ 191,301	\$ 95,731	\$ 35,818	\$ 19,451	\$ 2,535,298	\$ 271,399	\$ 3,148,998

Note:

<sup>1</sup> Overhead includes a fee on total value of raw labor + benefits + overhead

**Appendix H**  
**Local Involvement**



**Table 5. Local Involvement**

<b>Contact</b>	<b>Organization/Address</b>	<b>Phone/Fax/E-mail</b>	<b>Expertise</b>	<b>Support/Oppose</b>
Rhonda Reed	California Department of Fish and Game 1234 East Shaw Ave. Fresno, CA 93710	559.243.4005 x172 559.243.4061 <a href="mailto:rreed@dfg2.ca.gov">rreed@dfg2.ca.gov</a>	Fisheries, biology, habitat restoration	Support (co-applicant)
Kevin Faulkenberry	California Department of Water Resources 3374 E. Shields Ave. Fresno, CA 93726	559.230.3320 <a href="mailto:falkenb@falling.water.ca.gov">falkenb@falling.water.ca.gov</a>	Hydraulic engineering	Support
Scott Spaulding	US Fish and Wildlife Service 4001 N. Wilson Way Stockton, CA 95205	209.946.6400 x305 209.946.6355 <a href="mailto:scott_spaulding@mail.fws.gov">scott_spaulding@mail.fws.gov</a>	Fisheries biology	Support
Ted Selb	Merced Irrigation District P.O. Box 2288 Merced, CA 95344	209.722.5761 209.722.6421 <a href="mailto:tselb@mercedid.org">tselb@mercedid.org</a>	Engineering, water resources	Support (letter)
Jon Kelsey	East Merced Resource Conservation District P.O. Box 324 Snelling, CA 95369	209.563.6573 209.563.6139 <a href="mailto:kelsoid@elite.net">kelsoid@elite.net</a>	Geology, local RCD infrastructure and practices	Support
Bill Nicholson	Merced County Planning and Community Development Department 2222 M Street Merced, CA 95340	209.385.7654 209.726.1710 <a href="mailto:PL07@co.merced.ca.us">PL07@co.merced.ca.us</a>	Planning	Support (letter)
Bob Edminster	1073 Madison Avenue Los Banos, CA 93635	209.826.5425	Botany	Support (letter)
Michelle Langmaid	Santa Fe Aggregates P.O. Box 3042 Modesto, CA 95353	800.222.9777 209.524.0322	Aggregate mining issues and practices	Support (via letter from Linda Falasco)
Linda Falasco	Construction Materials Association of California 1029 J Street, Suite 300 Sacramento, CA 95814	916.554.1000 916.554.1042	Aggregate mining issues and practices	Support (letter)
Chris Robinson	Robinson Ranch P.O. Box 10 Merced, CA 95341	209.722.2502 209.722.2261	Aggregate mining and grazing issues and practices	Support
Jennifer Vick	Stillwater Sciences 2532 Durant Avenue, Suite 201 Berkeley, CA 94704	510.848.8098 510.848.8398 <a href="mailto:Jen@stillwatersci.com">Jen@stillwatersci.com</a>	Ecology, geomorphology	Support (included on proposal team)



## PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

2222 'M' STREET  
MERCED, CALIFORNIA 95340  
TELEPHONE (AREA CODE 209) 385-7654  
FAX (209)726-1710

ROBERT E. SMITH  
Director  
WILLIAM NICHOLSON  
Assistant Director

May 12, 2000

Mr. Steve Kellogg  
URS Greiner Woodward Clyde  
500 12<sup>th</sup> Street, Suite 200  
Oakland, CA 94607

RE: Merced River Ranch Pilot Project

Dear Mr. Kellogg:

URS Greiner Woodward Clyde and the California Department of Fish and Game propose to develop a phased restoration plan for the Merced River Ranch property and implement a pilot restoration project on a portion of the property. As I understand the proposal, the pilot project would evaluate proposed design criteria for channel and floodplain dimension modifications as well as identify riparian and wetland restoration opportunities.

The Merced County Planning and Community Development Department supports this proposed pilot project. This pilot project will help identify realistic reclamation opportunities for previously mined lands that is in support of stated General Plan policies of the County. Specific references to these goals and policies as listed in the Open Space/Conservation Chapter are as follows:

- GOAL 2: Soil, water, mineral, energy, historical and air resources are properly managed.
- POLICY 14: Significant mineral resources are recognized and responsibly managed.
- POLICY 17: Reclamation should be achieved in a manner that will protect public safety and enable lands to be put to subsequent beneficial use.

As you are aware, the County is involved in a public planning effort known as the Merced River Corridor Restoration Process which includes technical, stakeholder and broader public committees and outreach efforts. This process is being coordinated with various scientific research efforts along the Merced River. The proposed pilot project on the Merced River Ranch property should yield some useful information and possibly identify tools which support these broader river corridor restoration efforts.

Sincerely,

*William Nicholson*  
William Nicholson,  
Assistant Director

# MID MERCED IRRIGATION DISTRICT

May 15, 2000

Mr. Steve Kellogg  
URS Greiner Woodward Clyde  
500 12th Street, Suite 200  
Oakland, CA 94607

Re: Merced River Ranch Pilot Project

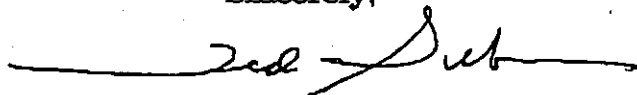
Dear Mr. Kellogg:

Merced Irrigation District (MID) is currently conducting a ten-year study program with California Department of Fish and Game (CDFG) to assess chinook salmon population dynamics in the Merced River. MID is also participating as part of the Merced River Technical Advisory Committee (TAC), established with funding from the Anadromous Fish Restoration Program in November 1998. The TAC has identified opportunities for restoring dredged lands along the Merced River in the vicinity of Snelling in northern Merced County.

URS Greiner Woodward Clyde (URSGWC) and (CDFG) propose to develop a phased restoration plan for the Merced River Ranch property and implement a pilot restoration project on a portion of the property. The pilot project would evaluate proposed design criteria for geomorphically functional channel and floodplain dimensions as well as riparian and wetland restoration constraints.

The MID supports the proposed pilot project proposed by URSGWC and CDFG at the Merced River Ranch. This effort will provide important benefits for fisheries habitat in the project area, and will also contribute to a better understanding that will benefit other restoration projects planned in the Merced River watershed.

Sincerely,



E.C. "Ted" Selb III  
Assistant General Manager, Water Resources

cc: Ross Rogers, General Manager



Construction Materials  
Association Of California

May 11, 2000

Mr. Steve Kellogg  
URS Greiner Woodward Clyde  
500 12<sup>th</sup> Street, Suite 200  
Oakland, CA 94607

Subject: Merced River Ranch Pilot Project

Dear Mr. Kellogg:

The Construction Materials Association of California consists of producers of aggregate, concrete and asphalt from the Tehachapi Mountains to the Oregon border. Our members are participating on the Merced River Technical Advisory Committee (TAC) established with funding from the Anadromous Fish Restoration Program. The TAC has identified opportunities for restoring dredged lands along the Merced River in the vicinity of Snelling, in northern Merced County.

There is currently very little information to assess the feasibility of restoring riparian, wetland and aquatic habitats on dredged lands. Evaluation of specific data for the Merced River would be valuable for future restoration projects.

URS Greiner Woodward Clyde and the California Department of Fish and Game propose to develop a phased restoration plan for the Merced River Ranch property and implement a pilot restoration project on a portion of the property. The pilot project would evaluate proposed design criteria for geomorphically functional channel and floodplain dimensions as well as riparian and wetland restoration constraints. The dredged gravels contained in the pilot project area will not be used commercially or in competition with our industry.

1029 J Street, Suite 300  
Sacramento, CA 95814  
(916) 554-1000  
fax: (916) 554-1042  
email: cmaac@telis.org

Accounting Office  
P.O. Box 276463  
Sacramento, CA 95827-6463  
(209) 223-0656  
fax: (209) 223 5812

EVERY THING WE USE EVERY DAY IS GROWN OR MINED

CMAC supports the proposed pilot project proposed by URSGWC and DFG at the Merced River Ranch. This effort will contribute to a better understanding that will benefit other restoration projects planned in the Merced River watershed.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'L. Falasco'.

Linda A. Falasco  
Executive Director

Robert Edminster  
INDEPENDENT BOTANIST  
CONSULTING ECOLOGIST

1073 Madison Avenue  
Los Baños, California 93635  
Phone # - 209 826-5425  
Fax # - 209 826 5014  
E-mail address - [rock@cell2000.net](mailto:rock@cell2000.net)

**MEMORANDUM**

To: Steve Kellogg - URS Greiner Woodward Clyde  
500 12th Street, Suite 200  
Oakland, CA 94607

Subject: Merced River Ranch Pilot Project

From: Robert Edminster  
Member - Technical Advisory Committee  
The Merced River Corridor Restoration Project

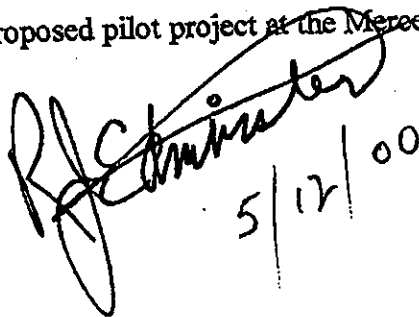
Date: May 12, 2000

My first contact with dredge tailings along the Merced and Tuolumne Rivers came as an undergraduate geography student in the late 1940s. I have been vitally interested in their restoration since that time and have made several evaluations of their ecological condition in recent years. Only recently has there been any general consensus as to the ecological value of dredge tailing restoration.

I see the proposed pilot project by URS Greiner Woodward Clyde and the Department of Fish and Game at the Merced River Ranch as a beginning of what will develop into the widespread restoration of dredge fields along several Sierra Nevada streams. Formal study is vital to clarify the feasibility of restoring this long dismantled habitat that now supports a functionally dead ecosystem. The Merced River Ranch project is particularly important in that it is designed to restore riparian, wetland, and aquatic habitats.

I support the proposed pilot project at the Merced River Ranch.

Sincerely,

  
5/12/00

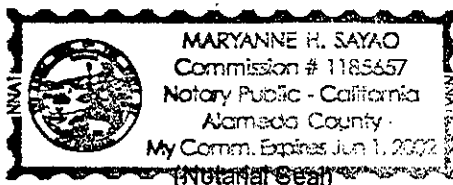
**Appendix I**  
**Contract Forms**

Agreement No.: \_\_\_\_\_

Exhibit: \_\_\_\_\_

**NONCOLLUSION AFFIDAVIT TO BE EXECUTED BY  
BIDDER AND SUBMITTED WITH BID FOR PUBLIC WORKS**STATE OF CALIFORNIA )  
 )ss  
COUNTY OF Alameda )Guilaine Roussel, being first duly sworn, deposes and  
says  
(name)that ~~he~~ she is Senior Vice President, Manager, Oakland Operations of  
(position title)URS Greiner Woodward-Clyde International Americas, Inc.  
(the bidder)

the party making the foregoing bid; that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false sham bid; and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

DATED: 5/11/00By [Signature]  
(Person signing for bidder)

Subscribed and sworn to before me on

MAY 11, 2000Maryanne H. Sayao  
(Notary Public)



## NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 19 (REV. 3-95)

COMPANY NAME

URS Greiner Woodward-Clyde International-Americas, Inc.

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HIV and AIDS), medical condition (cancer), age (over 40), marital status, denial of family care leave and denial of pregnancy disability leave.

## CERTIFICATION

*I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.*

OFFICIAL'S NAME

Guilaine Roussel

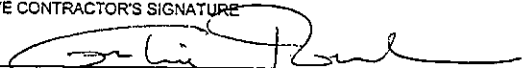
DATE EXECUTED

May 11, 2000

EXECUTED IN THE COUNTY OF

Alameda

PROSPECTIVE CONTRACTOR'S SIGNATURE



PROSPECTIVE CONTRACTOR'S TITLE

Senior Vice President, Manager, Oakland Operations

PROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Guilaine Roussel

**CONTRACTORS STATE LICENSE BOARD**

9835 GOETHE ROAD, SACRAMENTO, CALIFORNIA  
MAILING ADDRESS: P.O. BOX 26000  
SACRAMENTO, CA 95826  
(916) 255-3900 or 1-800-321-2752



TO: URS GREINER WOODWARD-CLYDE INC - CALIFORNIA  
100 CALIFORNIA STREET STE 500  
SAN FRANCISCO, CA 94111 - 4529

DATE: 10/27/1999

LICENSE: 674927

DEAR LICENSEE:

GUILAINE LEA ROUSSEL was approved as the RESPONSIBLE MANAGING EMPLOYEE for the A GENERAL ENGINEERING CONTRACTOR classification on October 26, 1999.

If you have any questions please contact us at the above address or telephone number.

RME/O Unit

## BIDDER'S BOND

We URS GREINER WOODWARD-CLYDE INTERNATIONAL AMERICAS, INC.AMERICAN HOME ASSURANCE COMPANY

, as PRINCIPAL, and

as SURETY, are hold and firmly bound unto the State of California in the penal sum of TEN PERCENT (10%) OF THE TOTAL AMOUNT OF THE BID of the Principal above named submitted by said Principal to the State of California, acting by and through the Department of Water Resources, for the work described below, for the payment of which sum in lawful money of the United States, well and truly to be made, to the Director of the Department to which said bid was submitted, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

In no case shall the liability of the surety here under exceed the sum of \$ 10%

## THE CONDITION OF THIS OBLIGATION IS SUCH,

That whereas the Principal has submitted the above-mentioned bid to the State of California, as aforesaid, for certain construction specifically described as follows, for which bids are to be opened at

SACRAMENTO,

(Insert name of city where bids will be opened)

, California, on MAY 15, 2000

(Insert date of bid opening)

for MERCED RIVER RANCH RESTORATION; NEXT- PHASE PROJECT MERCED COUNTY, CALIFORNIA

Copy here the exact description of work, including location, as it appears on the proposal)

NOW, THEREFORE, If the aforesaid Principal is awarded the contract and, within the time and manner required under the specifications, after the prescribed forms are presented to him for signature, enters into a written contract, in the prescribed form, in accordance with the bid, and files two bonds with the Department, one to guarantee faithful performance and the other to guarantee payment for labor materials, as required by law, then this obligation shall be null and void; otherwise, it shall be and remain in full force and virtue.

IN WITNESS WHEREOF, We have hereunto set our hands and seals on this 11th

day of MAY, 19 2000URS GREINER WOODWARD-CLYDE  
INTERNATIONAL AMERICAS, INC.

(Seal)

(Seal)

Guilaine Roussel - Principal  
Senior Vice President

(Seal)

(Seal)

AMERICAN HOME ASSURANCE COMPANY

(Seal)

(Seal)

JOHN T. LETTIERI, ATTORNEY-IN-FACT

Surety

ONE CALIFORNIA STREET  
Address SAN FRANCISCO, CA 94111

NOTE: Signatures of those executing for the surety must be properly acknowledged.

American Home Assurance Company  
National Union Fire Insurance Company of Pittsburgh, Pa.  
Principal Bond Office: 70 Pine Street, New York, N.Y. 10270

POWER OF ATTORNEY

No.03-B-01099

KNOW ALL MEN BY THESE PRESENTS:

That American Home Assurance Company, a New York corporation, and National Union Fire Insurance Company of Pittsburgh, Pa., a Pennsylvania corporation, does each hereby appoint

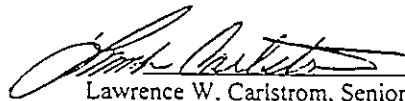
---John T. Lettieri, Bradley N. Wright, Dawn Shanley, Theresa Fermanich, Katsuko Takata, Carol B. Henry  
Kelly R. Bratton: of San Francisco, California---

its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa. have each executed these presents

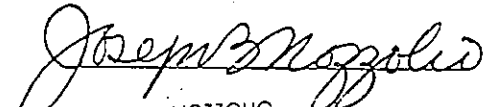
this 10th day of March, 2000.



  
Lawrence W. Carlstrom, Senior Vice President  
National Union Fire Insurance Company of Pittsburgh, PA.  
Vice President, American Home Assurance Company

STATE OF NEW YORK }  
COUNTY OF NEW YORK }ss.

On this 10th day of March, 2000 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa., to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seals of said corporations thereto by authority of his office.

  
JOSEPH B. NOZZOLIO  
Notary Public, State of New York  
No. 01-NO4652754  
Qualified in Westchester County.  
Term Expires Jan. 31, 2002

CERTIFICATE

Excerpts of Resolutions adopted by the Boards of Directors of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa. on May 18, 1976:

"RESOLVED, that the Chairman of the Board, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business;

"RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, undertaking, recognizance or other contract of indemnity or writing obligatory in the nature thereof;

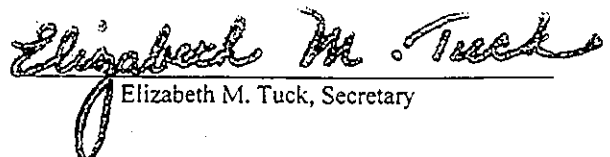
"RESOLVED, that any such Attorney-in-Fact delivering a secretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact."

I, Elizabeth M. Tuck, Secretary of American Home Assurance Company and of National Union Fire Insurance Company of Pittsburgh, Pa. do hereby certify that the foregoing excerpts of Resolutions adopted by the Boards of Directors of these corporations, and the Powers of Attorney issued pursuant thereto, are true and correct, and that both the Resolutions and the Powers of Attorney are in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation

this 11th day of MAY, 2000



  
Elizabeth M. Tuck, Secretary

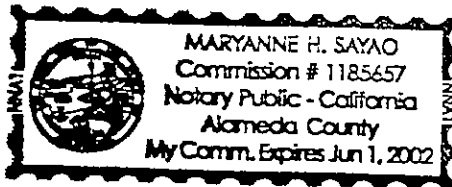
# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

No. 5907

State of CALIFORNIA  
County of ALAMEDA

On MAY 12<sup>th</sup>, 2000 before me, MARYANNE H. SAYAO, NOTARY PUBLIC  
DATE NAME, TITLE OF OFFICER - E.G., "JANE DOE, NOTARY PUBLIC"  
personally appeared EWLAINE ROUSSEL, SR. VICE PRESIDENT  
NAME(S) OF SIGNER(S)

☒ personally known to me - **OR** - ☐ proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s) or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Maryanne H. Sayao  
SIGNATURE OF NOTARY

## OPTIONAL

Though the data below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent reattachment of this form.

### CAPACITY CLAIMED BY SIGNER

- ☐ INDIVIDUAL  
☒ CORPORATE OFFICER  
SR VICE PRESIDENT  
TITLE(S)
- ☐ PARTNER(S) ☒ LIMITED  
☐ GENERAL
- ☐ ATTORNEY-IN-FACT  
☐ TRUSTEE(S)  
☐ GUARDIAN/CONSERVATOR  
☐ OTHER: \_\_\_\_\_

### DESCRIPTION OF ATTACHED DOCUMENT

BIDDER'S BOND  
TITLE OR TYPE OF DOCUMENT

NUMBER OF PAGES

MAY 15<sup>th</sup>, 2000  
DATE OF DOCUMENT

### SIGNER IS REPRESENTING:

NAME OF PERSON(S) OR ENTITY(IES)  
URS GRENER WOODWARD  
CLYDE INTERNATIONAL AMERICAS, INC.

JOHN T. LETTIERI  
SIGNER(S) OTHER THAN NAMED ABOVE

American Home Assurance Company  
National Union Fire Insurance Company of Pittsburgh, Pa.  
Principal Bond Office: 70 Pine Street, New York, N.Y. 10270

POWER OF ATTORNEY

No. 03-B-01099

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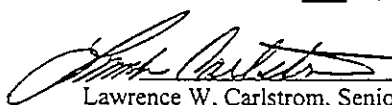
---John T. Lettieri, Bradley N. Wright, Dawn Shanley, Theresa Fermanich, Katsuko Takata, Carol B. Henry  
Kelly R. Bratton: of San Francisco, California---

its true and lawful Attorney(s)-in-Fact, with full authority to execute on its behalf bonds, undertakings, recognizances and other contracts of indemnity and writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby.

IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa. have each executed these presents

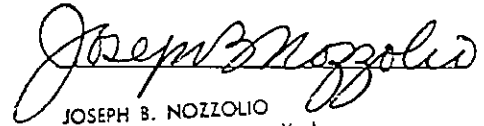
this 10th day of March, 2000.



  
Lawrence W. Carlstrom, Senior Vice President  
National Union Fire Insurance Company of Pittsburgh, PA.  
Vice President, American Home Assurance Company

STATE OF NEW YORK }  
COUNTY OF NEW YORK }ss.

On this 10th day of March, 2000 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, Pa., to me personally known to be the individual and officer described herein, and acknowledged that he executed the foregoing instrument and affixed the seals of said corporations thereto by authority of his office.

  
JOSEPH B. NOZZOLIO  
Notary Public, State of New York  
No. 01-NO4652754  
Qualified in Westchester County  
Term Expires Jan. 31, 2002

CERTIFICATE

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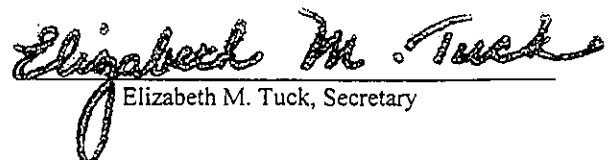
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IN WITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation

this 11th day of MAY, 2000



  
Elizabeth M. Tuck, Secretary

# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of SAN FRANCISCO

SS.

On MAY 11, 2000  
Date

before me, CAROL B. HENRY, NOTARY PUBLIC

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

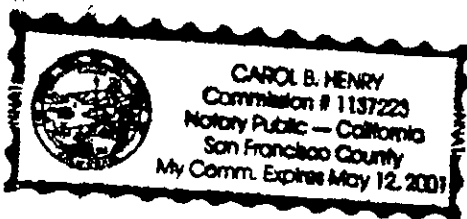
personally appeared JOHN T. LETTIERI, ATTORNEY-IN-FACT

Name(s) of Signer(s)

☒ personally known to me

☐ proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

Signature of Notary Public

## OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.*

### Description of Attached Document

Title or Type of Document: BID BOND

Document Date: MAY 11, 2000

Number of Pages: \_\_\_\_\_

Signer(s) Other Than Named Above: NONE

### Capacity(ies) Claimed by Signer

Signer's Name: JOHN T. LETTIERI

☐ Individual

☐ Corporate Officer — Title(s): \_\_\_\_\_

☐ Partner — ☐ Limited ☐ General

☒ Attorney in Fact

☐ Trustee

☐ Guardian or Conservator

☐ Other: \_\_\_\_\_

Signer Is Representing: AMERICAN HOME ASSURANCE COMPANY

RIGHT THUMBPRINT  
OF SIGNER

Top of thumb here

# APPLICATION FOR FEDERAL ASSISTANCE

OMB Approval No. 0348-0043

1. TYPE OF SUBMISSION: Application <input checked="" type="checkbox"/> Construction <input checked="" type="checkbox"/> Non-Construction Preapplication <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED 5/15/2000	Applicant Identifier
		3. DATE RECEIVED BY STATE	State Application Identifier
		4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier

5. APPLICANT INFORMATION	
Legal Name: URS Greiner Woodward-Clyde International-Americas, Inc.	Organizational Unit:
Address (give city, county, State, and zip code): 500 - 12th Street, Suite 200 Oakland, CA 94607	Name and telephone number of person to be contacted on matters involving this application (give area code) Steve Kellogg (510) 874-3031

6. EMPLOYER IDENTIFICATION NUMBER(EIN): 94-1716908	7. TYPE OF APPLICANT: (enter appropriate letter in box) <div style="display: flex; justify-content: space-between;"> <div>           A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District         </div> <div>           H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify) _____         </div> </div> <div style="text-align: right; border: 1px solid black; width: 20px; height: 20px; line-height: 20px; margin: 0 auto;">M</div>
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8. TYPE OF APPLICATION: <input type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es) <input type="checkbox"/> <input type="checkbox"/> A. Increase Award    B. Decrease Award    C. Increase Duration D. Decrease Duration    Other (specify): _____	9. NAME OF FEDERAL AGENCY: Not known at this time.
--	---

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: <div style="text-align: center;"> <input checked="" type="checkbox"/><input checked="" type="checkbox"/> - <input checked="" type="checkbox"/><input checked="" type="checkbox"/><input checked="" type="checkbox"/><input checked="" type="checkbox"/> </div> TITLE:	11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: Merced River Ranch Restoration - Next Phase Project
---	--

12. AREAS AFFECTED BY PROJECT (Cities, Counties, States, etc.): Merced County, California	
--	--

13. PROPOSED PROJECT	14. CONGRESSIONAL DISTRICTS OF:
Start Date    Ending Date Jan, 2001    Dec, 2003	a. Applicant    b. Project 9th Congressional District    18th Congressional District

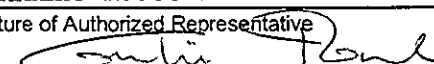
  

15. ESTIMATED FUNDING:	16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?																					
<table style="width:100%;"> <tr><td>a. Federal</td><td>\$</td><td style="text-align: right;">.00</td></tr> <tr><td>b. Applicant</td><td>\$</td><td style="text-align: right;">.00</td></tr> <tr><td>c. State</td><td>\$</td><td style="text-align: right;">.00</td></tr> <tr><td>d. Local</td><td>\$</td><td style="text-align: right;">.00</td></tr> <tr><td>e. Other</td><td>\$</td><td style="text-align: right;">.00</td></tr> <tr><td>f. Program Income</td><td>\$</td><td style="text-align: right;">.00</td></tr> <tr><td>g. TOTAL</td><td>\$</td><td style="text-align: right;">.00</td></tr> </table>	a. Federal	\$	.00	b. Applicant	\$	.00	c. State	\$	.00	d. Local	\$	.00	e. Other	\$	.00	f. Program Income	\$	.00	g. TOTAL	\$	.00	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____ b. No. <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E. O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW
a. Federal	\$	.00																				
b. Applicant	\$	.00																				
c. State	\$	.00																				
d. Local	\$	.00																				
e. Other	\$	.00																				
f. Program Income	\$	.00																				
g. TOTAL	\$	.00																				

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT?	
<input type="checkbox"/> Yes    If "Yes," attach an explanation. <input checked="" type="checkbox"/> No	

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT, THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.		
a. Type Name of Authorized Representative Guilaine Roussel	b. Title Senior Vice President	c. Telephone Number 510-874-3163
d. Signature of Authorized Representative 		e. Date Signed 5/15/00



**BUDGET INFORMATION - Construction Programs**

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ 9,654.00	\$ .00	\$ 9,654.00
2. Land, structures, rights-of-way, appraisals, etc.	\$ .00	\$ .00	\$ .00
3. Relocation expenses and payments	\$ .00	\$ .00	\$ .00
4. Architectural and engineering fees	\$ 128,261.00	\$ .00	\$ 128,261.00
5. Other architectural and engineering fees	\$ .00	\$ .00	\$ .00
6. Project inspection fees	\$ .00	\$ .00	\$ .00
7. Site work	\$ .00	\$ .00	\$ .00
8. Demolition and removal	\$ .00	\$ .00	\$ .00
9. Construction	\$ 2,088,222.00	\$ .00	\$ 2,088,222.00
10. Equipment	\$ .00	\$ .00	\$ .00
11. Miscellaneous	\$ .00	\$ .00	\$ .00
12. SUBTOTAL (sum of lines 1-11)	\$ .00	\$ .00	\$ .00
13. Contingencies	\$ 305,000.00	\$ .00	\$ 305,000.00
14. SUBTOTAL	\$ 2,531,137.00	\$ .00	\$ 2,531,137.00
15. Project (program) income	\$ .00	\$ .00	\$ .00
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 2,531,137.00	\$ .00	\$ 2,531,137.00
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X _____%		\$ .00